













P. A. Kelly

1983-1990

Catalogue #1-195

Journal

California

Ireland

Nevada

[illegible]

P. A. Kelly

1983-1989

Catalogue #1-195





Catalog

629 Miner Rd., Orinda, Contra Costa Co, California  
Collected Jan 25, E. Hashe

- 1 ♀ Microtus californicus 171-47-21-13 = 43g

1½ Mi E. Sage Hen Field Station, Nevada Co, CA (6280 ft.)  
Sept 9, 1983

- 2 ♂ (t=10x7) Microtus montanus 160-44-22<sup>\*</sup>-13 = 51.7g R. foot abnormal  
 3 ♀ Sorex vagrans 94-41-13-4 = 5.4g

1.6 Mi NE Chilcoat, Plumas Co., CA (5200 ft)  
Sept 11, 1983

- 4 ♀ (n.f.) Dipodomys panamintinus 256-160-44+10 = 62.6g  
 5 ♀ (par.) Thomomys monticola 179+65+29+8 = 74.0g coll. 5.4.83

Hastings Reservation (2000 ft.), Carmel Valley, Monterey  
Co., California - Oct. 29, 1983

- 6 ♂ (t=6mm) Peromyscus truei 182-92-22-23 = 23g Calham Station 2

Freeman Canyon (1.6 Mi below Walker Pass), Kern Co., CA (4600 ft)  
Nov. 19, 1983

- 7 ♂ (semi-skeletal) Ammodramophilus leucurus (skeleton)





268 Santa Rosa, Oakland, Alameda Co., California

Coll. by V. Wood's cat Oct 1, 1983

- 8 ♀ (3 implants) Rattus norvegicus 333-187-36-22 = 78g

Rock Pile near Sagehen Creek Field Station, Nevada Co., CA (6200ft)

Sept 10, 1983 coll Irene C. Yimossi

- 9 ♂ (t: 13x7) Neotoma cinerea (measurements mislaid)

Russell Reservation, Contra Costa Co., CA.

Coll. Jan 10, 1984 by Ed Haskie

- 10 ♀ (nulliferous) Microtus californicus 135-29-21-14 = 30g skull & chromosomes.

- 11 ♂ (juv) (t=5x3) Microtus californicus 125-45-22-14 = 23g skull chromosomes

born Jan 22, 1984 from Russell Reserv. Parents.

- 12 ♀ (nulliferous) Microtus californicus 138-45-21-13 = 25g skull chromosomes

Upper Stream Rock Pile, Sagehen Creek Field Station,  
Nevada Co., California (6300ft).

April 21, 1984

- 13 ♀ (nullif) Neotoma cinerea 347-160-41-31 = 228g  
TAIL DAMAGED

- 14 ♀ (nullif) Neotoma cinerea 358-152-44-32 = 267g

- 15 ♀ emb. (L.R-2L 7mm) Neotoma cinerea 350-140-94-32 = 240g

- (#95) 16 ♀ (nullif) Neotoma cinerea 354-157-42-30 = 254g



CatalogAlcatraz Island, San Francisco Bay, CaliforniaJune 1, 1984

June 1)	17	♂ (t=11x7)	<u>Peromyscus maniculatus</u>	182-93-20-14 = 26g	meiotic pref?
	18	♂ (t=9x5)	<u>Peromyscus maniculatus</u>	184-96-23-17 = 34g	
	19	♂ (t=9x5)	<u>Peromyscus maniculatus</u>	176-93-21-16 = 27g	Meiotic pref.
all Lawrence)	20	♀	<u>Peromyscus maniculatus</u>	182-84-20-20 = 23g	Skull Tissues, skin, skull
" "	21	♂ (t=8x6)	<u>Peromyscus maniculatus</u>	165-72-20-15 = 16g	" "
	22	♀ (tears 2 R.I.L.) P	"	171-87-21-17 = 20g	Skull, Tissues
	23	♀ (tears No Sides) P	"	175-88-21-18 = 19g	Skull, Tissues
	24	♂ (t=9x7) P	"	172-89-20-16 = 21g	Skull, Tissues
	25	♂ (t=8x6) P	"	155-79-20-16 = 17g	Skull, Tissues
	26	♂ (t=10x7) P	"	170-83-20-16 = 22g	Skull, Tissues
	27	♂ (t=11x8) P	"	173-89-21-15 = 27g	Skull, Tissues
	28	♂ (t=11x8) P	"	173-88-21-17 = 23g	Skull, Tissues
	29	♂ (t=11x8) P	"	182-95-21-16 = 26g	Skull, Tissues

Garbert House Estate, Garbert, Co. Kerry, IrelandJuly 6, 1984

30	♀ (nulliparous)	<u>Clethrionomys glareolus</u>	118-43-18-11 = 14g	Tissues
31	♀ (2 embryos 1 R.I.L.) C	"	135-48-18-13 = 22g	Tissues.
32	♀ (nullip, oestrous)	"	133-47-18-11 = 19g	"
33	♀ (nullip)	"	117-41-18-11 = 15g	"
34	♀ (nullip)	"	118-45-19-10 = 14g	"
35	♀ (nullip)	"	120-42-18-11 = 15g	"
36	♂ (testes 6x4)	"	111-40-18-11 = 13g	"
37	♀ (2 embryos 1 R.I.L.)	"	137-44-19-13 = 23g	"





CatalogKillarney National Park, Killarney, Co. Kerry, Ireland.July 10, 1984

38	♂ (t = 12x8)	<i>Clethrionomys glareolus</i>	146-55-19-12 = 26g	Tissues
39	♂ (t = 11x7)	"	130-42-18-11 = 21g	Skeleton
40	♀ (lact.)	"	135-45-18-12 = 25g	Tissues
41	♀ (nullip)	"	130-49-18-11 = 17g	Skeleton
42	♂ (t = 11x7)	"	124-45-18-12 = 16g	Tissues
43	♀ (parous)	"	119-46-19-11 = 16g	Skeleton
44	♂ (t = 10x6)	"	Chewed in trap 15g	Tissues
45	♀ (parous ? scars)	"	144-48-18-12 = 22g	Tissues
46	♂ (t = 11x7)	"	149-54-20-13 = ?	Tissues
47	♂ (t = 11x7)	"	142-52-19-12 = 23g	"
48	♀ (2 scars L.)	"	144-50-19-12 = 22g	"
49	♂ (t = 12x7)	"	133-48-19-12 = 24g	"
50	♂ (t = 11x7)	"	117-30-18-11 = 19g	"
51	♂ (t = 11x7)	"	144-50-19-12 = 23g	"
52	♂ (t = 10x6)	"	128-47-19-11 = 19g	"
53	♂ (t = 11x7)	"	125-39-17-11 = 21g	"
54	♂ (t = 12x8)	"	139-47-19-11 = 25g	"
55	♀ (lact. 4 R. & 1 L.)	"	144-51-20-12 = 24g	"
56	♀ (Parous Scars 2R. & 1L.)	"	137-45-18-12 = 20g	Skeleton
57	♀ (Parous Scars 2R. & 2L.)	"	143-49-19-12 = 23g	Tissues
58	♂ (t = 8x5)	"	135-43-9-12 = 19g	"
59	♀ (3 embryos 2R. & 1L.)	"	144-44-18-11 = 23g	"
60	♂ (t = 4x3)	"	119-41-18-11 = 12g	"
61	♂ (t = 4x3)	"	121-45-19-10 = 16g	"
62	♀ (Parous Scars 4L. & 3R.)	"	143-46-19-11 = 20g	"
63	♀ (nullip)	"	110-40-18-10 = 12g	"





CatalogKillarney National Park, Co. Kerry, IrelandJuly 9, 10, 11 (cont.)

64	♀ ( <sup>Parous</sup> Scars 3R. & 3L.)	<i>Clethrionomys glareolus</i>	148-49-19-13 = 22g	skelton 49 mm
65	♀ (nullip)	"	132-44-19-11 = 20g	"
66	♀ (nullip)	"	132-46-19-12 = 18g	"

Ballygriffy Wood 2 miles N.W. Barefield, Co. Clare, Ireland.July 25,

67	♀ (nullip)	<i>Clethrionomys glareolus</i>	126-45-20-13 = 17g
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Dromore Wood, 2 miles W. Carrisharr, Co. Clare, IrelandJuly 25

68	♀ ( <sup>preg 3x1mm</sup> Embs 2R. & 1L.)	<i>Clethrionomys glareolus</i>	128-47-19-13 = 22g
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69	♀ (nullip)	"	122-44-19-12 = 19g
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Special	70	♂ (t = 11x7)	"	136-49-19-13 = 27g
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July 26

"	71	♀ (nullip)	<i>Clethrionomys glareolus</i>	115-45-19-12 = 18g
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"	72	♂ (t = 12x8)	"	139-50-20-11 = 28g
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"	73	♀ ( <sup>3R. &amp; 1L.</sup> 4x20mm Embs)	"	113-28 <sup>W</sup> -19-12 = 33g
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"	74	♀ ( <sup>Lactating</sup> 5 Scars 3L. & 1R.)	"	139-48-19-12 = 28g
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	75	♀ (5 Scars 4R. & 1L.)	"	150-49-19-12 = 28g
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	76	♀ (1 Scar L.)	"	135-49-20-12 = 23g
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	77	♂ (t = 11x7)	"	133-51-20-11 = 22g
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Ballygriffy Wood, 2 Mi. N.W. Barefield, Co. Clare, Ireland.July 26

	78	♀ (1 Scar R.)	<i>Clethrionomys glareolus</i>	137-47-19-11 = 24g
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CatalogDromore Wood, 2 M. W. Crusheen, Co. Clare, IrelandJuly 26

79	♂ (t = 11 x 7)	<i>Clethrionomys glareolus</i>	145-54-19-12 = 27g
80	♂ (t = 11 x 8)	"	151-55-19-12 = 30g
81	♂ (t = 8 x 6)	"	130-51-20-12 = 21g
82	♂ (t = 10 x 7)	"	136-49-19-12 = 24g

Killarney National Park, Co. Kerry Ireland.July 11, 1984

83	♂ (t = 9 x 6)	<i>Clethrionomys glareolus</i>	138-50-19-12 = 24g
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Ballinacourty Wood, Glen of Aherlow, Co. Lifferry, IrelandAug 15, 1984

84	♂ (t = 11 x 8)	<i>Clethrionomys glareolus</i>	142-53-18-11 = 22g <sup>CHECKED</sup>
85	♀ (nullip)	"	130-50-18-12 = 13g
86	♀ (lost - No Scan)	"	130-48-18-12 = 16g
87	♂ (juv)	"	91-35-17-9 = 7g
88	♂ (t = 12 x 8)	"	133-52-19-12 = 23g

Gortawoken Wood, Glen of Aherlow, Co. Lifferry, IrelandIreland Aug 16, 1984

Special	89	♂ (t = 10 x 7)	<i>Clethrionomys glareolus</i>	122-45-19-12 = 18g <sup>skeleton</sup>
"	90	♂	<i>Sorex minutus</i>	3g skeleton
"	91	♂	"	4g "
"	92	♂ (t = 14 x 6)	<i>Apodemus sylvaticus</i>	169-86-23-15 = 20g skeleton
"	93	♂ (t = 13 x 7)	"	170-88-23-14 = 19g "
"	94	♀ (nullip)	"	153-83-22-14 = 15g "





CatalogGortavohan Wood (cont.) Aug 16, 1984

- Special 95 ♀ (nullip) *Clethrionomys glareolus* 125-44-19-11 = 17g Skeleton  
 " 96 ♀ *Sorex minutus* 3½ g Skeleton

Ballinacorney Wood, Glen of Aherlow, Co. Liffey, Ireland.Aug 16, 1984

- 97 ♀ (nullip) *Clethrionomys glareolus* 134-47-19-11 = 17g  
 98 ♀ (parous) " " 144-52-19-12 = 21g  
 99 ♀ (nullip) " " 122-45-19-11 = 14g  
 100 ♂ (t=10x7) " " 130-47-19-12 = 22g  
 101 ♀ (nullip) " " 118-43-18-11 = 14g  
 102 ♀ (4x2<sup>nd</sup> Emb. h.) " " 136-47-18-12 = 22g

Killarney National Park, Co. Kerry, Ireland.July 11, 1984

- 103 ♂ (t=6x4) *Sorex minutus* 3½ g Skeleton

Garbert House Estate, Garbert, Co. Kerry, Ireland.July 6, 1984

- 104 ♂ (t=3x2) *Clethrionomys glareolus* 110-39-18-10 = 9g  
 105 ♀ " " 95-35-16-7 = 7g

Killarney National Park, Co. Kerry, IrelandJuly 11, 1984

- 106 ♂ (t=11x8) *Clethrionomys glareolus* 144-53-19-12 = 23g

Ballinacorney Wood, Glen of Aherlow, Co. Liffey, Ireland.Aug. 16, 1984

- 107 ♀ (parous) *Clethrionomys glareolus* # 130-47-18-12 = 19g



CatalogAlcatraz Island, San Francisco Bay, CaliforniaJune 1, 1984108 ♂ (t=7x5) *Peromyscus maniculatus* 165-82-21-17=21gSagehen Creek Field Station, Nevada Co., CaliforniaOct 28, 1984109 ♀ *Neotoma cinerea* (only wt.) 250g

110 ♀ (nullip) " " 333-146-43-32 = 240g

111 ♀ (parous) " " 326-117<sup>SHORT</sup>-43-35 = 320g

112 ♀ (nullip) " " 315-133-44-32 = 172g

Hastings Natural History Reservation, Carmel Valley,  
Monterey Co., California (2000 ft.)Nov 3, 1984 (caught by E. Herke Oct 28, 1984)113 ♀ (lact) <sup>No scars</sup> *Neotoma fuscipes* 377-206-40-29 = 163g <sup>Tissue</sup> Skin & Skelal Bleeding 114 ♀ (lact) <sup>(1 SCAR L?)</sup> " " 375-183-40-30 = 210g <sup>Tissue</sup> Skin & Skel115 ♀ (lact) <sup>(2 SCARS (L & R))</sup> " " 363-187-39-31 = 170g <sup>Tissue</sup> Skin & Skel116 ♀ (nullip) " " 317-164-38-28 = 147g <sup>Tissue</sup> Skin & SkelFunny Color 117 ♂ (t=14x8) " " 376-200-39-31 = 228g <sup>Tissue</sup> Skin & SkelHwy 89, 0.35 mi N. Nevada Co line (near entrance  
to Sagehen Field Station), Sierra Co., CA.June 21, 1985118 ♀ *Erellizon dorsatum* Road Kill Complete Skeleton 790-200-95-35 = 9500g





CatalogSagehen Creek Field Station, Nevada Co., CA.

July 1, 1985 (killed by a dog)  
(Pickled in Alcohol)

119 ♀ Marmota flaviventris 442-130-71-17=1000g

Sagehen Creek Field Station, Nevada Co., CA.

120

July 29, 1985

120 ♂ Neotoma cinerea (#2198) 230-90\*-39-29=95g <sup>lunged</sup> Ketofane Overdose  
Took all tissues

July 30, 1985

121 ♂ (t=5mm) N. cinerea (#2199) 95g very ill, 1st Heart Puncture  
killed for tissues

Aug 1, 1985 <sup>roadkill</sup> (at Hwy 89)

alcoholic 122 ♀ <sup>(5x30mm Embs in 2. uterus)</sup> Tamiasciurus douglasii 330-130-21-55=290g

Sept 2, 1985

alcoholic 123 ♂ <sup>(t=6mm)</sup> Eutamias 230-99-36-21=63g died in trap at H. Spring

" 124 ♀ <sup>(mutilated)</sup> Eutamias 191-77-30-17=46g "

Sept 14, 1985

125 ♂ N. cinerea (#2231) 100g died from hemorrhage after Heart Puncture

Hastings Reservation, Carmel Valley, Monterey Co., CA.

Oct 13, 1985

Skel. 126 ♂ <sup>(t=12x7)</sup> N. fuscipes 360-189-?-?=185g\* \*remains after being mutilated in trap.

Oct 19, 1985

Skull 127 N. fuscipes <sup>kept skull only.</sup> found rotten mutilated remains in missing trap

Dec 18, 1985

128 ♂ (t=5mm) N. fuscipes 229-111-34-25=55g (Took Tissues)

emb. Skel. Died f. hypothermia in trap at Hze! Probably offspring of ♀ #2267

2 Weasles: One 17mm one on r. flank. A 10mm one on Throat



## Catalog

Hastings Nat. Hist. Res., Monterey Co., California

Feb. 4, 1986

skelaton 129 ♂  $t = 17 \times 11$  ( $\rightarrow 2261$ ) N. fuscipes 410 - 206 - 41 - 31 = 285g Tissue: Kidney + P. Liver  
Trash Dealt. (See Notes)

Feb. 24, 1986

" 130 ♂  $t = 16 \times 9$  " " (#2274/1025-1026) 365<sup>x</sup> - 168<sup>x</sup> - 41 - 32 = 195g Tail Damaged Tissue: Kid, Liver, HT + Blood  
Hypothermia

April 2, 1986

" 131 ♂  $t = 2 \text{ mm (MAX)}$  " " (2nd of ♀ 2267 & H.1 4 ♂ 2257?) 96 - 34 - 15 - 7 = 13g Hypothermia, recovered, abandoned Tissue: Kid, Liver & HT.

April 3, 1986

" 132 ♂  $t = 14 \times 10$ , C. Shi = 7 x 5 (2253) " " 357<sup>x</sup> - 159<sup>x</sup> - 39 - NO ears = 189g Transmitter O.K. Weasel? Kill. Kid, Liver, HT + Mus.

April 13, 1986 (found dead in trap @ H15.)

" 133 ♀ (2254) " "

May 13, 1986

" 134 ♀ (2234) " " Loc., no emb. (found hypothermic May 12, died in lab) (dehydrated) 285<sup>x</sup> - 99<sup>x</sup> - 40 - 31 = 218g Spiky inside Liver + Kid.

June 21, 1986 (from Hastings + Red Hze Cabin)

" 135 ♂  $t = 16 \times 9$  " " 410 - 211 - 40 - 32 = 231g (Hastings Cabin?) Tissue: Saliva, Blood, Saliv. Glands, Liver, Kid, Heart, Muscle  
" 136 ♂  $t = 9 \times 5$  " " 349<sup>x</sup> - 152<sup>x</sup> - 39 - 31 = 198g (Red Hze Attic?)  
" 137 ♀ nullip " " 152g (Red Hze Attic)

June 28, 1986 (from Red Hze Attic)

" 138 ♀ Perf. Nipples 1 mm diam. " " 326 - 156 - 38 - 30 = 139g Tissue: Saliva, Blood, Sal. Glands, Liver, Kidney, HT, Mus.

July 10, 1986

" 139 ♀ Nullip, Perf. nipples 1 mm wide x 2 mm long 368 - 190 - 39 - 31 = 126g Griffins last weekend. Tissue: Blood, Sal. Gl., Kid, HT, Liver + Mus.  
" 140 ♂  $t \approx 12 \text{ mm}$ , sperm slide 435 - 229 - 43 - 34 = 337g " + urine "

Clearwater Creek, c. 3 mi. E. Hwy 395, Mono Co., California

July 15, 1986

Shel. 141 ♂  $t = 6.0$  Neotoma cinerea 328 - 137 - 43 - 31 = 182g Blood, HT, Kid, Liver & Muscle.





Catalog  
BasorealisHarvey 158, S. Grant Lake, Mono Co., California (7200 ft.)July 16, 1986

+ part. skel	142	♀	multif. imbric.	<i>Neotoma cinerea</i>	258-119-38-27 = 108g	Tissue	(Blood, HT, Kid, Ear, Mus)
"	143	♀	multif.	"	305-142-40-30 = 154g	"	
"	144	♂	t=7mm	"	375-176-44-32 = 307g	"	Head badly dried.
"	145	♀	multif. imbric.	"	323-141-40-31 = 171g	"	
"	146	♀	"	"	312-148-41-30 = 181g	"	
"	147	♀	late last. 4 v. small Embs in R. Horn	"	372-169-41-32 = 259g	"	2 are failed on ranch.
"	148	♀	multif.	"	297-133-41-30 = 156g	"	
"	149	♀	multif. imbric.	"	337-159-41-32 = 216g	"	
"	150	♂	t=10x6	"	373-169-43-30 = 318g	"	2 WOUNDS: 1 on R. YMP 1 on Cut Flank
"	151	♂	t=4mm	"	238-107-38-27 = 83g	"	BRUISES on R. FLANK.

Yuba River, (Immediately) S.E. of Salmon Creek Bridge, Sierra Co., California (5040 ft.). [Lge Rockslide E. of Yuba]Sept. 10, 1986

unp. Skel.	152	♀	multif.	<i>Neotoma cinerea</i>	323-132-45-33 = 221g	Tissue	
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Sagehen Creek Field Station, Nevada Co., CaliforniaSept. 11, 1986 (#1272 from Rockslide)

"	153	♂	t=5mm	<i>Neotoma cinerea</i>	321-138-43-32 = 187g	Tissue	
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Hastings Nat Hist. Reservation, Carmel Valley, Monterey Co., CA (1760 ft.)(School Hse Attic) Nov. 7, 1986 (Killed Nov 11, '86 - weighed 214g then)

BYU. Clyde Pritchett made up study skins	154	♀	Rec. last, 5 meas	<i>Neotoma fuscipes</i>	319-153-31-24 = 235g	Blood, Saliva, Ear, Tissues	
	155	♀	Nullip	"	409-212-39-33 = 180g	Blood, Saliva, Ear, Tissues	

(Haystack Hill) Nov. 8, 1986



Catalog

629 Miner Rd., Orinda, California - 1c O.P. Pearson's

Sun. <sup>Nov. 16</sup> ~~March 23~~, 1986

COULDN'T FLY, DIED BY MONDAY.

156 ♀? <sup>(12 VARIED THRUSH)</sup> Ixoreus naevius

Hastings Natural History Reservation, Carmel Valley, CA.

Sun. Nov. 30, 1986

157 ♀ Odocoileus hemionus lion Kill, Took Photos, Pugmark  
Casts, Skin from Neck, and  
complete head. Also called  
Ian Tait he got 6  
remote shots of a lioness  
and 1 half-grown cub.

Dec. 10, 1986

ant. sh. 158 ♂ <sup>t = 8mm</sup> Neotoma fuscipes 217g Took liver, Kid, Urine,  
Blood, Ear + Saliva.

Jan 4, 1987

159 ♂ #2257 (see Journal)  
" " "

Feb. 25, 1987

160 3 fetal Sus scrofa ~~Mother~~ Sow was  
killed by 2 Ridgeback Cross  
Pig dogs behind the Red  
Hze on Sun Feb 22 around 7:30 AM.  
Sow weighed c. 150 lbs.  
Found the cubs and stomachs  
+ some intestines today. No  
decomposition due to v. cold cond-  
itions since Sunday. The  
Dog Owner took the pig  
away. Prof. Pig Hunter.

( froze all 3 for  
next year's  
mammalogy  
class )

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Catalog

Hastings Nat. Hist. Res. Carmel Valley, Monterey Co., California

April 22, 1987 (bell from 100A?)

Comb.  
Skel. 161

$t = 16 \text{ mm}$

#1386-1356

→ N. fuscipes

400-215-41-25 = 214 g.

629 Miner Rd., Orinda, California Horn in ear

May 3, 1987 (died in captivity)

162 N. fuscipes

Alc. spec.

163

"

"

"

"

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co., Calif.

May 28, 1987

(found dead by Anne Brooke on May 25)

#1437-39 (Horn & 2266).

164

♀

N. fuscipes

280-146-37-27 = 107g

In good physical condition: no warbles and no wounds <sup>(on skin)</sup> except for a single small mark on the underside of the skin around the middle of back. However some bruising all around the rib cage and under the left "forearm". Also thoracic cavity full of blood. Verdict: death by constriction possibly by a Gopher Snake or a King Snake.

H.N.H.R. Top of Sch. Hill (E. End) June 1, 1987

165

♀

Sus scrofa

Shot w. Ruger 30-06 • Lung Shot.

(SKULL ONLY)

c. 150 lbs.

Also shot 1 of 3 piglets (♂)

Scavenger Predator  
Skull Removed by A

H.N.H.R. Carmel Valley CA, July 9, 1987

166

♀

N. fuscipes

353-178-<sup>HF</sup>? - 28

= 192g

PAROUS  
2 SCARS ON  
L. HORN

Mutilated by G. Fox, lost R. Foreleg, Both H. Legs Broken  
Killed when found at 0520 PST at H. 11





Notes

Hatting at St. Joe, Iowa, near Vinton Co. Jail

July 27, 1937

167 Neotoma insculpta

sketch material

very low Owl Pellet 540? under old Chastanuta supply Pole on Agave 14 ft

July 28, 1937

168

Cowenox Bay

found in my bed at this bed the about 2 years ago.

Sept. 24, 1937

169

insculpta

found in - insculpta on insculpta 3 insculpta

Sept. 25, 1937

170

insculpta

sketch insculpta

insculpta died in insculpta accident at insculpta 45 Dec 21, 1936

171

insculpta

sketch insculpta

insculpta died in insculpta accident at insculpta 45 Dec 21, 1936

Sept. 26, 1937

172

insculpta

sketch insculpta

173

insculpta

sketch insculpta

Dec. 18, 1937

175

lynx lynx

(see Journal entry for today)

176

lynx lynx

(see Journal entry for today)

March 25, 1938

177

lynx lynx

220 - 11 - 31 - 22 = 450

Heat 5 hours - Comb 5 hours - 10 hours

Victim of insculpta at 11:10

March 26, 1938 - (along fence near insculpta)

178

Owl Pellet (Neotoma Thomomys Rhynchomys?) I caught



P.A. Kelly

## Catalog

Hastings Natural History Reservation, Carmel Valley,  
Monterey Co., California. (2000 ft.)

March 29, 1988

(Parous)  
179 ♀ Peromyscus boylii 181 - 95 - 21 - 18 = 26g + PART. SKEL.

Sibs capt. in Red Hse Attic on March 28 and 29 (respectively)  
Weighed 148g and 134g (resp.) at that time.  
In Captivity since.

April 15, 1988

(multif. imperf.) #1669  
180 ♀ Neotoma fuscipes 342 - 186 - 40 - 29 = 124g (Ht, Liver, Kid) (tissues)

t = 6 x 3 mm #1691  
181 ♂ " " 338 - 183 - 40 - 29 = 124g (tissues)

Mother + Sib of ♀1669 + ♂1691 Capt. in Red Hse attic last night. Can't say whether PK183 is a full sib. or half sib. yet.

(Nat. Preg. Parous, Capt.) #1670  
April 16, 1988

182 ♀ Neotoma fuscipes 394 - 202 - 40 - 32 = 224g Tissues Part. Skel.

(t = 4.5 x 2.5 mm)  
183 ♂ " " 274 - 140 - 37 - 26 = 88g " "

Snaf-trapped by Tim Griffin. Fairly thin. I bet its mom was ♀1730 (now in captivity in Lower Barn).

April 16, 1988

t = 4.5 x 2.5  
184 ♂ Neotoma fuscipes 231 - 115 - 35 - 25 = 62g Comp. Skel.

Capt. in Red Hse attic today c. 1900 PST. Full sib of #183 above.

April 16, 1988

185 ♀ Neotoma fuscipes 265 - 140 - 36 - 27 = 90g Tissues Part. Skel.

Captured in the School Hse Garage with ♀1350 by Ellie Steinberg (Dave Riddle's Field Assistant) last night.

June 17, 1988

t = 16 mm  
186 ♂ Neotoma fuscipes 401 - 192 - 41 - 32 = 310g Tissues Part. Skel.





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Catalog

Hastings Nat. Hist. Reservation, Carmel Valley

Monterey Co., California

June 27, 1988

- 187 ♂ *Neotoma fuscipes* 411 - 218 - 43 - 31 = 255g PART. SKEL  
t. = 14 mm, c.e. = 9 mm. (Stanback Caught in Red Hse attic on June 22nd) TISSUES  
188 ♂ " 325 - 169 - 38 - 29 = 130g " (STANBACK CAUGHT IN RED HSE ATTIC LAST NIGHT)  
189 ♀ " 291 - 143 - 36 - 24 = 94g Comp. Skel  
Tame Kidd found dead on Lane at 2nd Crossing

Capt. over the past week in the School House Garage by Walter Koenig.

July 14, 1988 (See Journal)

- 190 ♀ *Neotoma fuscipes* 410 - 218 - 42 - 33 = 222g (Part. Skel.)  
t = 5 x 3 mm Capt. (5 SCARS L.) (3 SCARS R.) 1350  
191 ♂ " 269 - 131 - 38 - 27 = 93g (" " )

Sagehen Creek Field Station, Nevada Co.,  
California

July 19, 1989

- 192 ♂ *Neotoma cinerea* 292 - 142 - 38 - 30 = 130g Comp. Skel. + Liver  
t = 5 mm (1918-19)

Briones Reg. Park, Contra Costa Co., California

- 192 Hro Feb. 25, 1989  
193 Wroger

Hastings Natural History Reservation, Carmel Valley, Monterey Co., California

July 28, 1989

- 194 ♀ *Neotoma fuscipes* } Both Skull Only  
195 ♂ " " } See Journal.



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1.

Sage Hen Creek Field Station, Nevada Co., California

in, Sept. 9

Left MVZ at 10.30 AM on the Mammalogy Course (163) Field Trip to Sage Hen Creek Field Station, Nevada Co., CA arriving there c. 2.15 PM. The 16 students were divided up into 4 groups of 4 under Jim Patton (SLP), Bill Lidicker (WZL), Ed Heske (TA) and Rick Warner (TA). I was in Rick's group with Mike Gellerman, Irene Timossi and Ann Brook.

At about 4 PM we all set off to set individual lines of 30 Museum Special Snap Traps baited with a mixture of peanut butter and oatmeal. Our group drove to some damp meadows and chaparral (off Hwy 89) 1½ miles east of the field station.

I crossed the stream on the west side of the Hwy and walked up through a very damp meadow until I reached a north-south running lumber track. I set my first line of 15 traps from a medium sized boulder beside the track and on eastwards up into the drier meadow. Traps were set 10 paces apart and tied to vegetation. At the end of this line, I set another at right angles (to the left, i.e. North) into young pine and currant shrubs.

We also set some large Tomahawk wire traps for bushy-tailed woodrats in a big patch





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of boulders near the field station. Rich also set some kill-traps (Macabees) for gophers.

About 10 pm we went to check all our traps. I caught 2 Sorex vagrans and an adult (♂) and juv. (♀) Microtus montanus in my first line, but nothing in the line thro' the trees

Sat., Sept. 10

At 8 am. we again checked, but lifted our trap lines. I had another adult (♀) montanus and a juv. (♀) Peromyscus maniculatus in line 1, but again nothing in my 2nd line. Irene also got a bushy-tailed woodrat in the rockpiles.

Back at the field station, we skinned and stuffed some of our specimens, and refrigerated and labelled the rest.

After lunch we drove to:

Sagebrush Desert, 1.6 Mi NE Chilcoat, Plumas Co, CA (5200ft)

I paired up with Hike and we set 3 Goma hawks in the large rocks to the east of the dirt track for woodrats. From the most northerly clump of rocks we set a line of 20 shermans (10 paces apart) eastwards & towards & beyond a single pine tree. We also set another line of 23 Museum Specials back to and along the rocks. The Sherm



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were baited with oatmeal.

Carol Patton had a substantial chicken salad prepared for the hungry trappers. She also gave us chilli last night to keep us on our toes.

We checked traps at about 10 pm

Results: (PK and MG)

Shermans; 2 ♀ Peromyscus released

Snaf Traps; 1 ♂ Peromyscus partly eaten

Tomahawks; Nothing

Sun.

Sept 11 Checked traps again 8 AM (PK and MG)

Shermans; 1 ♀ Dipodomys panamintinus

2 Perognathus parvus released 2 ♀ 1 ♂

6 Peromyscus maniculatus 2 ♀ 4 ♂

Snaf Traps; 4 P. maniculatus

1 P. parvus (still living)

Tomahawks; Nothing.

We collected all our traps and then drove back to Sagehen (arr. c. 11 AM) where we did some more stuffing before lunch. We then cleaned the camp under Carol's directions and left for Berkeley at 2 PM. Very hot crossing the Central Valley (90-100°) and arrived in Berkeley c. 6 PM.



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Journal

4.

Oct. 28 Hastings Reservation, Carmel Valley, Monterey Co., CA.

Left MVZ @ 10:20 on the Mammalogy Field Trip to Hastings. Arrived around 2 pm after stopping in Salinas for lunch and supplies.  $\frac{3}{4}$  the class already made this trip last weekend. Cathy joined me on this trip to learn how to set trap lines, and how to skin and prepare specimens.

Around 3 pm Jim Patton marched us up a huge hill to the west of the buildings where we trapped along a chaparral. Cathy and I laid 3 Museum Specials at each of 5 locations (2, 4, 6, 8 & 10) in the dense chaparral. Joseph Lindahl did the remaining 5 on that line. We baited with a mix of peanut butter and oatmeal as at Sageshen.

Before dark, Mike Gellerman and I also set a line of 17 Shermans - baited with oatmeal - in the chaparral behind the schoolhouse.

The Calhoun line was not to be checked until morning, but Mike and I checked the shermans around 9 pm. We also checked 4 Tomahawks we had set for woodrats near the buildings.

Shermans: 2 Dipodomys venustus

5 Peromyscus truei

1 Perognathus californicus

Tomahawks: 1 Neotoma fuscipes (juv)

One of those Dipodomys was caught in the same





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trap as a P. tunci a few minutes before.

t., Oct 29 Checked trap lines in the morning.

Calhoun Line

1	<u>Peromyscus</u>	<u>californicus</u>
6	<u>Peromyscus</u>	<u>truei</u>
1	<u>Peromyscus</u>	<u>maniculatus</u>
1	Brown	Powhee

Sherman 12 Peromyscus truei

In the morning Cathy and I each stuffed a P. truei, and in the late afternoon we helped Patti Garvey set Tomahawks and live Gopher traps for badgers and weasels.

We checked the traps again in the evening.

Calhoun Line 1 Junko

Shermans 10 Peromyscus truei  
1 Eutamias merriami

After a great feed of lasagne and salad, courtesy of Carol Patton, Jim showed us two carousels of slides from his work in Peru. Really impressive, hope to visit South America during my stay in Berkeley.

Oct. 30 Checked and lifted all traps by 9 am

Calham line: 2 Perognathus californicus  
1 Peromyscus californicus (juv)  
1 Peromyscus truei  
1 Peromyscus boylii  
1 Peromyscus maniculatus (juv)



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Shermanns: 8 Peromyscus truei  
1 Peromyscus maniculatus  
1 Peromyscus boylii

I continued autopsying the Calhoun line specimens while Cathy prepared and stuffed a Perognathus californicus. All animals caught in live traps were released except for one Dipodomys venustus which I took back to the MVZ as a pet.

We scrubbed and cleaned the lab from top to bottom, and left the Reserve around 1 p.m. Cathy and I travelled back with Rick Warner but we detoured to take in Point Lobos and Monterey. At Pt Lobos I took photos of a sealion basking on a rock only 20 ft away from me. We also watched a ♀ scatter Enhydra lutris feeding her half-grown pup in a rocky inlet. The coastline at Pt Lobos is really spectacular, it's a pity it's so far away from Berkeley. Later on we got within 15 ft of a feeding otter at the Monterey pier, there were also very many sealions basking on the breakwater.

I took a number of slides of the otter in Monterey and I also took some shots of our catch in Hastings with the help of Ed Heske in a large bird enclosure there.



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Nov. 17 Freeman Canyon (16 Mi below Walker Pass), Kern Co., CA (4600 ft)

Got a seat from JLP at c 7.30 pm from Albany to Freeman Canyon in the northwestern Mojave desert, arriving around 2.30 am. Cathy came along on this trip as well and we stopped in Bakersfield for a cup of coffee and to stretch our legs. Small group on this trip: JLP, Ed Heske, Mike Gellerman, Ann Brooks, Naomi Walker, Cathy and I. On arrival at our prearranged Rendezvous in the Canyon, Patton hit the sack immediately but Cathy and I set up our new Eureka Alpine Meadows tent. There was a strong cold breeze blowing, but we slept comfortably in the shelter 'til 7 am.

Nov. 18 Got up at 7 am and spent 20 futile minutes trying to light Jim's Coleman stove. When we finally got it going it worked very well however. After coffee, muffins, fried potatoes and egg piperade, courtesy of Mike & Ed, we started setting Macabee kill traps for gophers. Cathy & I set 25 marking each trap station with an orange flag.

Also with Mike G., we set an equilateral triangle of 60 collapsible shermans baited with oatlets. We had 20 traps on each





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side of the  $\Delta$  with 10 paces between each pair. We used certain conspicuous hills and peculiar Joshua trees as sighting points.

Checked traps @ 2.30pm but had nothing in the Macabees and only one Whitetail Antel of the Ground Squirrel Ammospermophilus leucurus in the Shermans.

Checked again 7.30pm:

1 <u>Thomomys bottae</u>	Macabees
7 <u>Peromyscus truei</u>	Shermans
4 <u>P. maniculatus</u>	"
1 <u>A. leucurus</u>	"
4 <u>Dipodomys panamintinus</u>	"

t., Nov. 19 Didn't get up til 8am, after a breakfast of eggs, potatoes, cake and coffee went out to check traps.

Macabees: 1 T. bottae

1 Dipodomys panamintinus

Shermans: 6 D. panamintinus

6 P. maniculatus

5 P. truei

At 11am relocated the 25 macabees to a bend over the dry creek. Lots of gopher signs so hopefully more luck today.

2pm Shermans: 6 A. leucurus (1 died)

1 Peromyscus truei (died)

3pm Macabees: 1 T. bottae



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4.30 pm Macabees: 1 G. bottae

9.30 pm Shermans: 27 D. panamintinus.

7 P. truei

5 P. maniculatus

Started raining heavily after 9 pm so we all had to abandon our camp fire and run for our tents.

Nov. 20 Got up at 7.15 after a night of gale-force winds and torrential rain. The tent held up very well, but Mike and Ed got washed out during the night.

7.30 am lifted Macabees: 3 G. bottae

9.00 am lifted Shermans: 10 D. panamintinus (1 dead)

10 P. truei

8 P. maniculatus

1 A. leucurus

We all mucked in and helped Jim skin and disembowel his collection of gophers and then cleaned up the campsite and burnt or buried our rubbish. Left around 11 am and we drove over Walker Pass and thro' the Kern River Valley back to Palsumfield and 'civilization'. The Kern River Valley is the most spectacular sight I've seen to date in California, and I look forward to returning there to camp & fish for trout.



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1.

Richmond Field Station, 47th St. & Hoffman Blvd,  
Richmond, Contra Costa Co., California

Jan. 17 Left M.V.Z. at 8.30 am with Maria Alicia Barros and drove to the Richmond Field Station. After turning left inside the station we found a lot of gopher sign in a patch of grassland between the Eucalyptus grove and some buildings. Although the day was bright and sunny, the soil was very wet and sticky. We laid all our 16 live gopher traps by 10.30 am and we checked them periodically for the next 3 hours. We only got two (MAB. 77 and 78) but one of those was an exceptionally large male. Although we only caught two, many traps were heavily plugged with wet soil, and we might have had better success if we checked and unclogged them more frequently.



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2.

Richmond Field Station, 47th St & Hoffman Blvd.,  
Richmond, Contra Costa Co., California.

Feb. 16 Left MVZ at 2 pm with Ed Herke and Mike Gellerman to set up trapping grids in Richmond. Rained heavily in the morning but slackened off in the afternoon. Some of the grids were very waterlogged, but we persisted and put down 300 stakes in each 60 x 20 m grid. Stakes were 2 m apart. Lots of vole and gopher sign despite the wet conditions.

Sagehen Creek Field Station, Nevada Co., California.

April 19 Left MVZ at 4 pm with Ann Brooks and Cathy, and we drove to Sagehen Creek Field Station, 8 miles north of Yreka in the Sierra Nevada. We stopped for food in Auburn and watched a spectacular red sunset. 20 mins after continuing our journey however we hit sleet and rain, which developed into a blinding snow blizzard as we continued upwards. After 1/2 hr or so we decided to put on the snow chains on Ann's 4V.D. Toyota. We then could only continue at about 20 mph. We finally took the chains off near Yreka as the snow died down and arrived at the field station about 10.30 pm. Mike Gader Williams - the Station



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Manager - gave us a hearty welcome and showed us into the Conference Room where we would bed down for the weekend. The room was very warm despite the icy conditions outside.

ay April 20 Awoke at 5 am on account of the glare outside but went for a walk to check out some of Peter Escherich's study sites - notably the 'Spring' Rockholes 20 mins walk from the Station Buildings. [The purpose of this trip is to carry out a pilot study on genetic variation in Bushy-tailed Woodrats Neotoma cinerea towards a prospective dissertation research project. P. Escherich's thesis of 1977 on the social biology of woodrats at Sagehen.] Escherich's 'Upper Spring' study site was quite impressive and covered a large area but at 5.30 am was too covered with snow from last night to search for woodrat sign - droppings and white urine residues on the rocks.

The girls got up around 7 and we had a great omelette for breakfast. Then Mike (Y.U.) came down and opened up the lab and trap shed for us. We set 4 traps near uninhabited buildings and 10 more at the Upper Spring Site. Tomahawk traps were used and were baited with a mix of oatmeal & peanut butter.





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By now the weather had improved and the sun was shining.

After lunch we loaded more traps into Ann's car and we drove to the 'Rockslide' Site (between the Station Buildings and the Highway 89 gate) where we set 10 traps. We then crossed Highway 89 to Excherich's 'X89' site and set another 6 traps. The latter site had a mixture of large boulders and loose talus, whereas the Rockslide is a large relatively flat expanse of big andesite boulders.

Around 9pm we decided to check all the traps. I checked the Upper Stream Site and witnessed the escape of a subadult bushy-tail around the side of a closed trap door. Also 2 other subadults responded to my head light and movements, and came within 8 ft of me to investigate. Meanwhile Cathy and Ann checked the Rockslide and X89 but got nothing.

Friday April 20

I again got up at 5am and headed out to the Upper Spring to check the traps. I got nothing at the cabin-laid traps so shifted them to the Upper Spring also. From the 10 traps at Upper Spring I got 3 female Neotoma (228g, 267g & 240g) but one died from catching its head in the trap door. All three



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were in breeding condition but only one was pregnant (3x7mm embryos). We prepared study skins from all three and I also took blood, liver, spleen, kidney, heart & muscle samples for electrophoresis.

We decided to delay trap baiting until 6 pm to cut down on losses to smaller species. We also rearranged the traps to give: 13 at Upper Spring, 10 at the Rockslide, and 9 at X89.

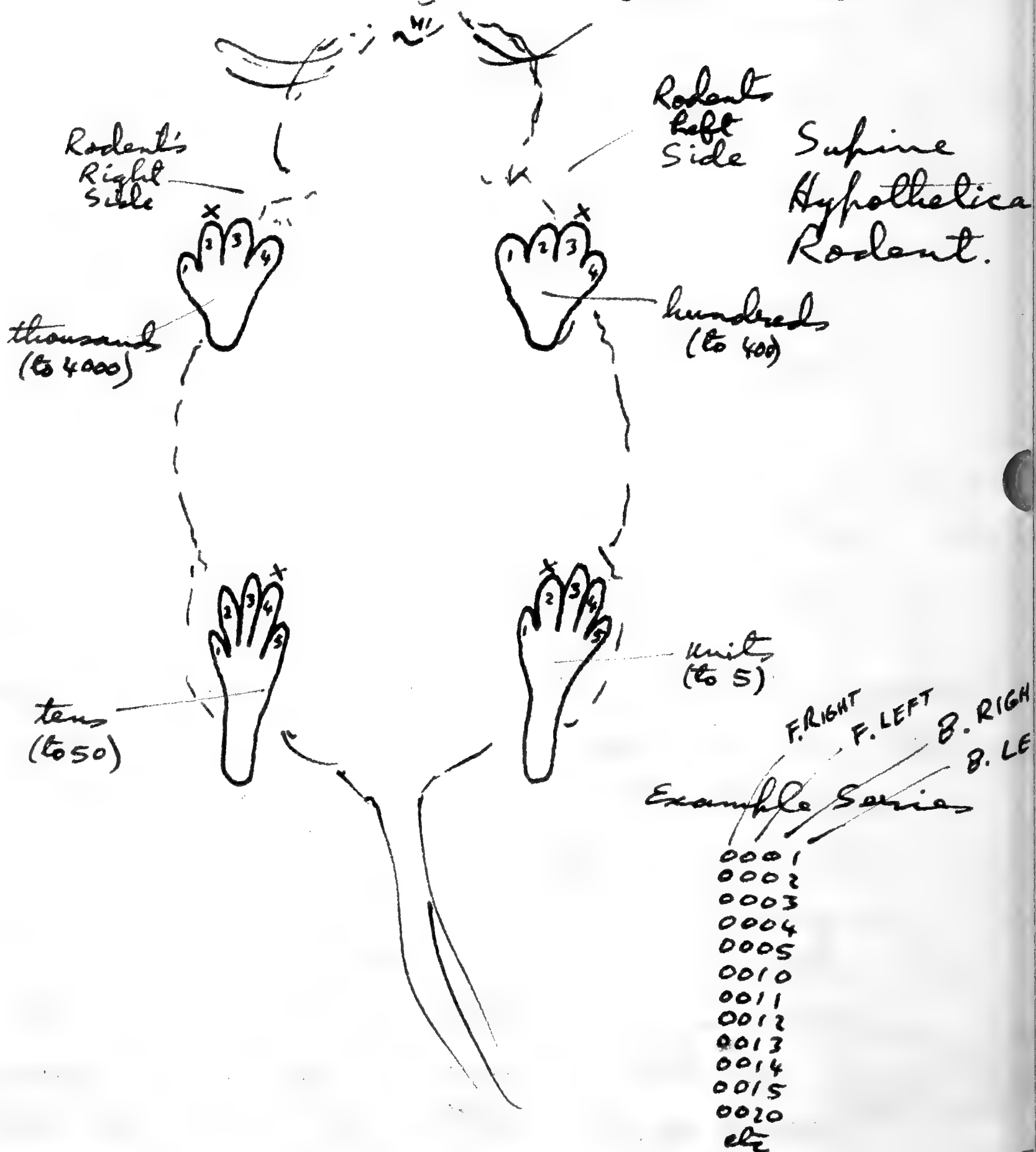
At 9 pm we went out to check all traps. I got 3 more animals (<sup># 2207 - released</sup> ♂ 420g, <sup>Berkeley</sup> ♀ # 2205, ♀ # 94) at the Upper Spring while Cathy and Ann got nothing at the Rockslide and X89.

Sunday Slept in til 6.30 this morning, and  
heil #.21 at 7 am we went out to check and collect  
all the traps. I collected the remaining  
10 at the Upper Spring (no animals), the  
girls however finally got one animal  
(♀ (Bark) # 95) at the rockslide (10 traps),  
but again nothing at X89 (9 traps).

Released 2  
aged animals  
at Upper Spring

At 9.30 am we released the big male (# 2207) and a ♀ (# 2205), and we took the  
other ♀ from the Upper Spring and the one  
from the Rockslide back to Berkeley.

Toe - Clipping for Capture -  
Release - Recapture of  
Small Mammal, (from Ed Hesse).



\* The above animal  
 is # 2342 and has  
 four toe clips.

May 30 Of the 2 ♀ Bushy-tails I brought back to Berkeley from Sagehen, one (#94) gave birth to a litter of 3<sup>1</sup> <sup>(on April 30)</sup>. These 3 animals were ear-tagged and toe clipped (see across) today. I also was able to collect a lot of blood from the tail clip and spun it down for electrophoresis. The animals were at first anaesthetized with Metaflane of course. At first I tried to take blood from the eye sinus and the tail vein but didn't have much success.





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At Pearson's, 629 Miner Rd, Orinda, Contra Costa Co.,  
California

May 16 Set up 45 pairs of longworths  
to with Ed Herke and Ann Brook on the grassy  
May 19 hill opposite Pearson's. 5x9 stations on  
grid. Testing for trap responsiveness of  
Microtus californicus ♂♂ and ♀♀ to clean  
and dirty (♂ or ♀ respectively) trap bedding.  
Each station contained a clean trap and  
alternate lines of 9 were either ♂ (2 lines)  
or ♀ (3). Ann & I returned each morning  
(17, 18, & 19) to check for captures - sexed, weighed  
and also checked for (or gave) toe clips (sae  
across). Vole catches were fairly low only  
about 2 or 3 dozen animals for the 3  
days and some of those were recaptures.  
We also got a number (±6) Reithrodontomys  
and 3 alligator lizards. Both Ann and  
I got plenty of practice at handling  
and toe-clipping voles. But I still  
managed to get a nasty bite from  
the last animal I handled.



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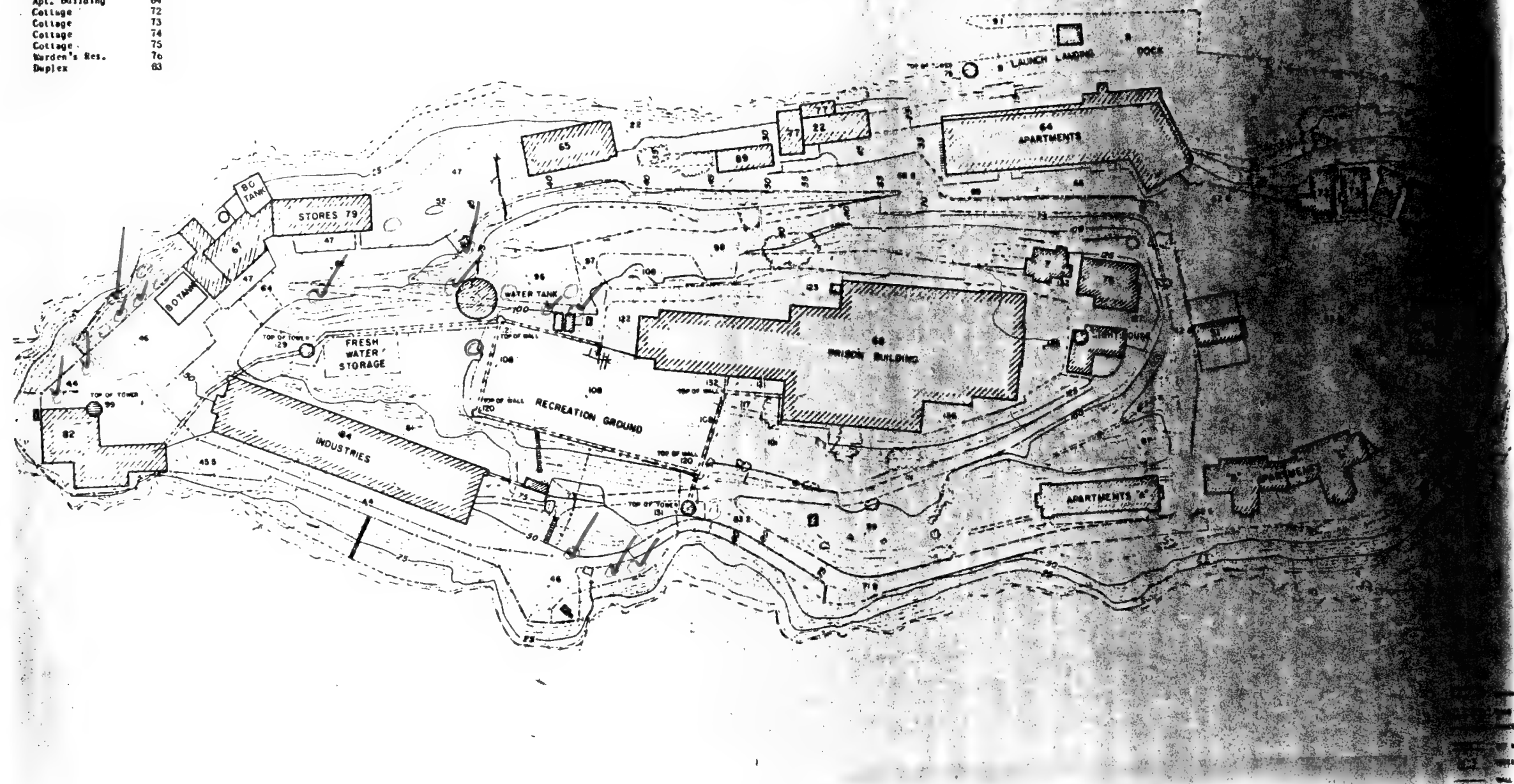
Alcatraz Island, San Francisco Bay, California

Mon, May 31 Ray Perotti met me at the MVZ front desk at 9.15 am, we headed off and got BART to S.F. Embarcadero Station \$2.80 round trip. We walked from the Embarcadero along the Docks to Pier 41 where we got the Red & White Yacht to Alcatraz. Ray has a PhD in Behaviour & Ethology and has been working on Western Gull Breeding Colonies on Alcatraz for 2 yrs. He gave me his wife Cynthia Annetta's (Barlow's lab on fish behaviour) park service jackets, these jackets got us a free ride and VIP service on the Ferry.

Before Ray proceeded to work on his colonies, he showed me to some likely places for trapping. And I proceeded to set longworths baited with a mixture of scratch grain and oats. Seeing as this was only a pilot study I only took 25 traps with me. Nothing is known for definite about small mammals on Alcatraz although Ray and Cynthia have occasionally found mouse remains in the vicinity of gull nests. Birdies pronounced on previous



BUILDING NUMBERS	
Build	No.
Main Building	68
Ind. Warehouse	82
Ind. Shops	84
Pistol Range & Stor.	22
BOQ & Boat Shop	77
Electric Shop	80
Social Hall	65
Shops & Stor.	70
Hand Ball	31
Power House	07
Apt. Building	A
Apt. Building	B
Apt. Building	C
Residence	7
Apt. Building	64
Collage	72
Collage	73
Collage	74
Collage	75
Warden's Res.	76
Duplex	83





Trapping locations  
on Alcatraz

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such specimen as 'unusual'.

See map for trapping locations on Alcatraz:

Station ①: Water Tower Gull Colony. Set 6 traps, 2 along wall near fuel tanks, 2 in the scrub across from fuel tanks, 1 in 'tunnel', & 1 under bush at Top of steps.

Station ②: Foghorn (N.E. end) Set 2 traps one in each clump of bushes (laurel & buckbrush).

Station ③: Water Tower Slope and Cliff. Set 4 traps in bushes & bramble along base of slope although 1 was nearer to the 'industry' building.

Station ④: East 'Meadow' - Fence enclosed grassy slope N.E. of a Big Chimney Stack at 'Industry' Building. Set 7 traps, 4 in grass (<sup>small</sup> leucocroas present) near upper fence and 3 along path near lower fence.

Station ⑤: The Incinerator, Set 3 traps in Bramble and Yucca.

Station ⑥: Southwest of Parade ground. Set remaining 3 traps in Cyperus, Bramble, and in Rubble (with Padded Plant?).

Weather was fairly good throughout: Sunny, light fog or smog, but a strong breeze which made jackets necessary.

#15 Had One ♀ young on June 17.

	Date Killed	Cat #	
# 1	June 19	PAK 26	Skin, Skull & Tissues
# 2	June 18	PAK 23	Skin, Skull & Tissues.
# 3	June 189	PAK 24	Skin, Skull & Tissues.
# 4	June 19	PAK 25	Skin, Skull & Tissues.
# 5	June 15	PAK 21	Skin (Bill Lawrence), Skull, Tissues.
# 6	June 18	PAK 22	Skin, Skull & Tissues.
# 7	June 19	PAK 27	Skin, Skull & Tissues
# 8	Oct. 15	PAK 108	Skin, Skull & Tissues. (Died from Exhaustion, attempted with #15)
# 9	June 15	PAK 18	Skin, Skull, Tissues, Meiotic Prep.
# 10	June 8?	PAG 40	Skin, Skull, Chromosomes, Tissues
# 11	June 20	PAK 28*	Skin, Skull, Tissues, Chromosomes * See Lab Notes
# 12	June 15	PAK 20	Skin (By Bill Lawrence), Skull, Tissues
# 13	June 15	PAK 19	Skin, Skull, Tissues, Meiotic Prep.
# 14	June 20	PAK 29	Skin, Skull, Tissues, Chromosomes.
# 15			
# 16	June 14	PAK 17	Skin, Skull & Tissues.

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Hats were also a prerequisite against dive-bombing gulls. We finished up after 2 pm, had lunch, got ferry & BART back to Berkeley. Back in MVZ at 4 pm.

June 1 Met Ray again at 9.15 am and we were on Alcatraz at 11.15. While he went off to check his parade-ground gull colony, I toured the island and checked & collected all traps:

<u>Place</u>	<u>Station</u>	<u>House #</u>	<u>Wt (g)</u>	<u>Sex</u>	<u>Cond/Comments</u>
Wall	1	1	21.5	♂	Not Scrotal (Sandy?)
Wall	1	2	25.0	♀	lact, preg?
Steps	1	3	20.0	♂	Not Scrotal
Laurel	2	4	16.0	♂	Juv
Buckbrush	2	5	16.0	♂	Juv
Ivy?	3	6	22.0	♀	lact, preg?
Bramble	3	7	21.0	♂	Scrotal (Sandy)
Upper Grass	4	8	22.0	♂	Scrot. (Sandy Col.)
" "	4	9	25.0	♂	Scrot.
Near L. Fence	4	10	17.0	♂	Non Scrot (Mutil Tail)
Bramble	5	11	23.0	♂	Scrot.
Bramble	5	12	23.0	♀	lact.
Yucca	5	13	22.0	♂	Scrot.
Bramble	6	14	23.0	♂	Scrot. (Sandy?) &
Cypripedium	6	15	24.0	♀	lact.
Rubble	6	16	24.0	♂	Scrot.

16 Total, 12 ♂♂ & 4 ♀♀



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While I ~~was~~ checking traps I also bumped into one of the Park engineers - he said there definitely were rats in the buildings and in the roof of the cell block.

So there were at least 16 Peromyscus maniculatus on the island, and I had 64% trap success. Longworths are difficult to transport while assembled but I solved my problem by putting empty traps (9) into my backpack. Then I tightened up the other 16, labelled them and taped them shut. Those 16 fitted neatly into one of Bob Jones' new canvas shoulder bags. We got back to Berkeley at 3.30 pm and I transferred all 16 mice to individual holding cages, with bedding, grain, rat chow and water, and left them in my office for the moment.





## Journal

### Fieldtrip to Ireland

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Cathy & I flew out from SFO around 11am headed for Shannon Ireland, via JFK New York. JFK however got flooded out after 5" rain in 9 hours and was closed down for 12 hrs. We were diverted to Newark, where we waited in line 4½ hrs to see a TWA official. Around 2am all remaining Aer Lingus passengers were put on a coach to JFK. At JFK there was no more room on the one Aer Lingus flight to Shannon, so they (A.L.) put us on a Kuwait Boeing 747 for London. At London we transferred to an A.L. flight for Dublin where we transferred finally to the A.L. Jumbo for New York which dropped us off in Shannon. Over a period of 30 hrs we were at 6 different airports and on 4 different planes, instead of 3 and 2 respectively. Fares, \$802 round trip each.

July 3

Converted our Travelers Cheques to Irish Pounds and lodged with the Trustee Savings Bank in Galway. The US Dollar was at an all time high against the Irish Pound, IR£1.00 = US\$1.13, so the remainder of my \$350 Alexander Grant-in-Aid \$328 converted to IR£ 290.265.

Called up to see James Fairley (JSF) in the Zoology Dept. at Univ. College Galway<sup>(UCG)</sup>. He arranged lab space and keys for me over the coming 2 months. Also got liquid Nitrogen from the UCG Physics Dept.

Liquid Nitrogen at Physics Dept, U.C.G.

July 3	10 l
" 12	10 l

Journal

July 5 Met JSF & MCG at 9am and we drove to Garbert House Estate across the Shannon Estuary in Co Kerry (2 hr. from Galway). We got permission from the owners (the Hesleys) to trap for bank voles Clethrionomys glareolus. We set fourteen lines of 10 longworths (5 paces apart) baited with oats, in Bracken and Bramble through out the estate. We got the Garbert-Killimor Ferry back across the estuary at 4.30pm (£7.50 return<sup>fare</sup>). The Ferry leaves Killimor on the hr. every hr., and Garbert on the  $\frac{1}{2}$  hr. every hr. Warm, <sup>dry,</sup> and sunny throughout the day.

July 6 JSF and I were back in Garbert at 12.30pm and started checking traps. We were surprised to find a very low trap success. We got seven live voles, two dead ones, and one fieldmouse Apodemus sylvaticus. We decided to have lunch and leave the traps down for another two hours. We were rewarded with only one more vole. Again the weather was dry and sunny, but I was going crazy with a heavy head cold.

July 7

Cathy and I

July 8 made study skins from our Garbert voles, we also collected liver, kidneys, spleen & heart for electrophoresis back at the MVZ. We also tried to get blood but initial quantities were too small.





## NATURE TRAILS

There are four self-guiding nature trails, for which leaflets are available, within the Park.

*Old Boathouse* (short): on a wooded peninsula by Muckross Lake.

*Mossy Woods* (intermediate): in the natural woodlands close to the shores of Muckross Lake.

*Arthur Young's Walk* (long — 2½ miles): through the natural woodlands on the peninsula between Muckross Lake and Lough Leane.

*Blue Pool* (intermediate): in the planted woodlands around Cloghereen Pool.

## MUCKROSS DEMESNE

The heart of the National Park is the Muckross Demesne, centred on Muckross House and Gardens.

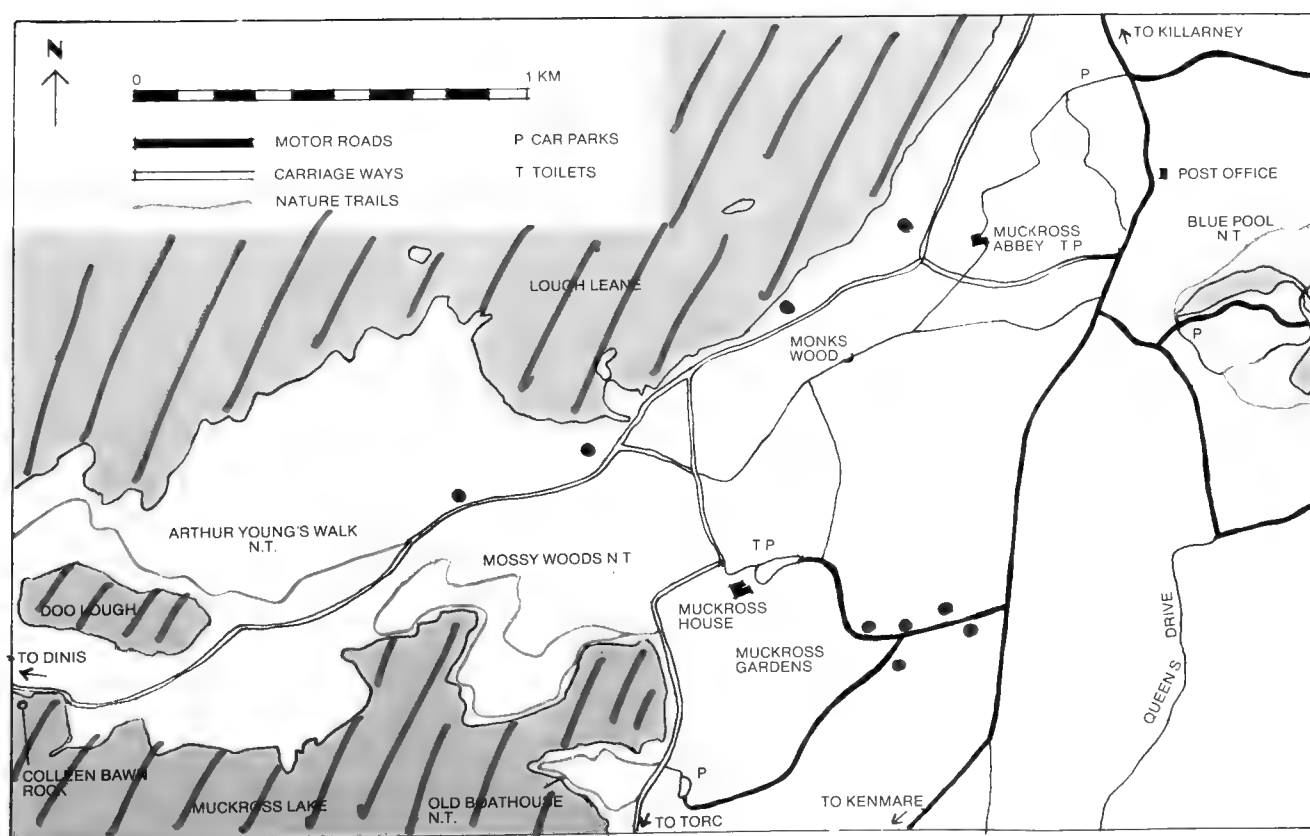
Muckross Gardens are one of the most beautiful parts of the National Park. Among the many attractive features for which they are renowned are a fine collection of *Rhododendron* species and hybrids, and of *Azaleas*. Many tender and exotic trees and shrubs flourish in the mild climate and sheltered location of the Gardens, around the large expanse of lawns. There are extensive water gardens, and an outstanding rock-garden designed on a natural limestone outcrop, containing a comprehensive collection of dwarf conifers, decorative shrubs and alpine plants.

A pedigree herd of Kerry cattle is

another feature of the demesne.

Muckross House, built in 1843, is now managed by the Park authorities and local trustees as a major centre for visitors. Here visitors can learn about the folk-life of Kerry, in the trustees' well-known museum, and about the National Park and its significance. Other facilities include a crafts shop and café.

Pedestrians and cyclists have 24 hour access to the demesne at all entrances. Jaunting cars enter by the Main Gate and Muckross Abbey Gate, and leave by the Torc and Dinis exits. Motor cars enter and leave by the Muckross House Gate. Opening times for the admission of jaunting cars and motor cars are displayed at the entrances.



• TRAPPING LOCATIONS.



## THE NATIONAL PARK

The Bourn Vincent Memorial Park, commonly known as the Muckross Estate and comprising about 11,000 acres was presented to the Nation in 1932 by Mr. and Mrs. William Bowers Bourn and their son-in-law, Senator Arthur Vincent. The spirit of the gift is shown by Senator Vincent's words, "I want especially to have the young people come to Muckross to trail those mountains and to enjoy nature in all its aspects." These lands form the nucleus of the present National Park. In recent years further extensive areas have been acquired including the

Knockree Estate near Killarney, the island of Innisfallen presented by Mr. John McShain, and the lands of Glena. The aim of the National Park is to conserve the natural features and beauty of the area for the future, while providing for enjoyment of them by the public.

## VEGETATION AND WILDLIFE

Within the Park are extensive areas of natural woodland, including the fine oakwoods and yew-woods on the Muckross Peninsula. The oceanic climate permits luxuriant growth of mosses and filmy ferns in the woodlands. The Park also includes interesting areas of bog on the uplands. Some of the characteristic plants of the region are found elsewhere only in southern and south-western Europe, including the Arbutus or strawberry tree.

On and around the slopes of Mangeron roam the only herd of Red Deer in the country which are of native Irish stock. Numerous Japanese sika deer can be seen in the woodlands, and many other kinds of mammals, birds and smaller animals are also found.

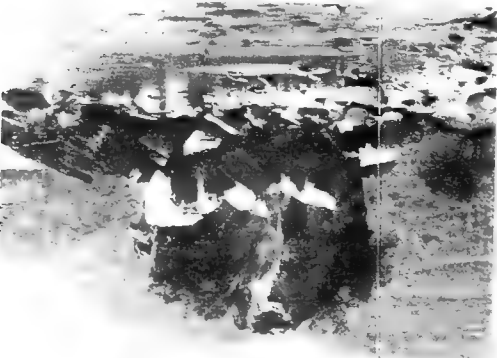
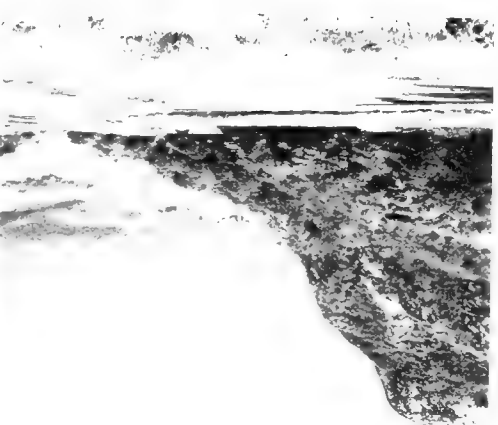


## SCENERY

The combination of forest, lake and mountain that makes up Killarney's scenery is world-renowned. Magnificent views can be enjoyed of Torc, Mangeron and Purple Mountains within the Park and of the nearby McGillicuddy's Reeks, highest mountains in Ireland, especially when seen across one of the three lakes, Lough Leane, Muckross Lake and the Upper Lake. Other scenic attractions lie in the woodlands and around the lake shores, including Torc Waterfall, and the Colleen Bawn Rock.

## HISTORY

The early history of the region is represented within the Park by the ruins of Innisfallen Abbey, where St. Finian the Leper is said to have founded a monastery in the 7th century. The well-preserved ruins of Muckross Abbey, a Franciscan Friary founded in the 15th century, contain the graves of Kerry chieftains and poets. In more recent times the Muckross Estate was the home of the Herbert family, who lived here until the end of the last century.



## KILLARNEY NATIONAL PARK



NATIONAL PARKS AND MONUMENTS SERVICE

## PÁIRC NÁISIÚNTA CHILL AIRNE SEEING THE PARK

**Jaunting Cars:** a traditional feature of Killarney are available to take visitors to Muckross House and Gardens and other areas of the demesne.

**Motor Cars:** may enter the demesne only as far as Muckross House. A number of car parks serve as access points for visitors to other parts of the National Park.

**Bicycles:** which can be hired in Killarney, are a convenient form of transport in the Park, particularly within the demesne.

**Walkers:** can visit many parts of the National Park which are not accessible in other ways. Besides the developed roads and nature trails there are many paths and walks throughout the Park.

## BYE-LAWS

Visitors are requested to observe the bye-laws so that the beauty and interest of the National Park may be conserved.

The bye-laws prohibit:  
Damage or disturbance to animals and plants;

Picking flowers;  
Carrying firearms;  
Leaving litter (except in bins provided);  
and other harmful activities.

SEIRBHÍ NA  
BPÁIRCEANNA  
AGUS NA  
SÉADCHOMHARTHAÍ  
NÁISIÚNTA



P.A. Kelly  
1984

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## Journal

July 9 Killarney National Park, Co. Kerry, Ireland.

Cathy and I met JSF at UCG at 9am. We loaded the Zoology Dept Van with traps, bait and field gear. I've got the use of the van for 3 days but it will cost me 10p/mile. It took us about 3½ hours to drive to Killarney. On arrival we checked in with the Park Manager in Muckross House. Lot of heavy rain and continuous drizzle throughout the day, so Cathy & I opted for Bed & Breakfast (£6/person/day) instead of camping. JSF was not about to rough it regardless. We laid 30 traps in Bracken & Bramble near the Drive way from the Kenmare Rd to Muckross House. We laid the remaining 117 traps in Ross 'Island' west of the castle. The 'island' had high vole numbers on previous trips by JSF. In the evening Cathy & I got a substantial meal for £3.30 in the Stella Cafe, and afterwards tried the Guinness & Stag Cider in Danny Mann's.

July 10 JSF called round for us (Sweetman's <sup>B&B</sup>) at 9.30 am and we started checking traps. Again we spent the day trying to keep dry in the continuous drizzle. We were <sup>h</sup>appalled at our low trap success only 2 Voles from 117 traps on the 'Island' and 4 Voles from 30 traps along the Muckross House Driveway. We decided to relocate some trap



P.A. Kelly  
1984

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## Journal

lines and shifted 60 traps from Ross Island to similar habitat on the Huckerross Peninsula. We also laid 40 Museum Specials baited with a mixture of peanut butter & oatmeal along the Driveway, to supplement the 3 lines of Longworths already there. Again we had an evening meal in the Stella, badly wanted after the damp & drizzle of the day. We checked the lines along the Driveway at 9.30 pm, and Cathy & I got lodgings in JSF's accommodation (O'Shea's - Deerhouse) (£8/person/night) for the night. This is getting too expensive, we'll have to camp out from now on.

Wed, July 10      Off at 7.30 and has the usual BOB Breakfast of Juice, Cereal, Bacon/Egg/Sausage, Brown Bread, Toast and Tea or Coffee. We then got on with lifting the traps and, despite the 3rd day of rain, we enjoyed it on account of the better trap success.

Total Catch over 3 days:

	<u>C. glareolus</u>	<u>A. sylvaticus</u>	<u>Sorex araneus</u>
<u>Huckerross House</u>			
Traps Nights			
Longworths (30) (2)	8	3	—
Museum Special (40) (1)	6	6	1
<u>Ross Island</u>			
Longworths (117) (1)	9	19	—
(57) (1)			
<u>Huckerross Peninsula</u>			
Longworths (60) (1)	8	17	1
<u>Totals</u>			
	31	45	2



P.A. Kelly  
1984

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## Journal

Skeletons and Tissues were taken from dead animals and the living animals were taken back to UCG and caged in groups of 5 with seed, water & vegetation. We left Killarney at 2.30pm and got back to UCG at 6pm.

July 24 Dromore Wood, 2 Mi. W. Crusheen, Co. Clare, Ireland & Ballygriffy Wood, 2 Mi. N.W. Barefield, Co. Clare, Ireland.

Cathy and I loaded up the Renault 5 in the morning. Left Galway at 10am and we reached our destination in Clare at 11am. Unfortunately we had to drive in to Ennis to get a key to the Forestry gates from Michael Barry. We set 50 longworths (baited with oats) in Ballygriffy Wood, and 50 more in Dromore Wood. Traps were laid at usual 5 paces apart in lines of 10 mainly in patches of Bracken & Bramble which bordered the forest roads. That done we drove 20 miles west to the narrow, winding, country roads of Clare through Lisdoonvarna to Poolin. Specifically, to O'Connor's Pub in Poolin, this pub is famous for its folk music and the Guinness is excellent to boot. One of the sons, Sean, is a friend of mine from college (UCG) and he opened a small but excellent seafood restaurant next door to the pub. We ate there a few weeks later and the meal was





Journal

superb. He had a nice selection of wines as well. We camped in Doolin overnight but left early the following morning for Ballygriffy & Dromore.

1, July 25

Checked all the traps around 8am. Got only 3 voles and no mice. Really poor trap success. I made skeletons and took tissues while Cathy cooked breakfast. Really warm weather, and the flies were a nuisance - got some relief by wearing caps smeared with repellent. We spent some of the afternoon on the beach in Lahinch, but even there we were pestered by swarms of <sup>small</sup> lady-birds (which actually bit). To make matters worse the water was still very cold. We loaded up on groceries and drove back to Dromore where we set the 50 Museum Specials (baited with peanut butter/oatmeal mix). Got 1 vole in the Specials in the evening, but only field mice in the longworths. We camped at a lovely spot on the lakeshore near Thomond Castle.

2, July 26

Got up at 7am to see a lovely haunting mist hanging over the lake and the castle. Took some photos to capture the moment. We checked the Museum Specials before breakfast (3 Voles & 8 Mice). I made skeletons and tissues while Cathy cooked bacon and eggs for breakfast. There was a Berkeley



# Journal

influence however - a big mug of Pests coffee to warm the heart and shake the hand. We then drove to Ballygriffy Wood and lifted the Fifty Longworths (1 Vole), then the <sup>50</sup> Dromore Wood Traps (7 Voles), and finally the 50 Museum Specials at Noon (1 Vole). In all we got 16 voles so not too bad, drove back to UCG where the remaining live animals could be processed in comfort.

	#	(tm)	<u>Clethrionomys</u>	<u>Apodemus</u>
Ballygriffy Longworths	(100)		2	2
Dromore Longworths	(100)		9	6
Dromore Specials	(50)		5	8

Aug. 14. Ballinacourty Wood and Gortawcher Wood, Glen of Aherlow, Co. Tipperary, Ireland.

We got up early and loaded the car with traps, camping gear and supplies before heading off for the Glen of Aherlow - about 2 hrs drive from Galway. We arrived around lunchtime and got hold of the local forester (O'Brien) at the Forestry Hut in Ballinacourty Wood, he said we could trap where ever we wanted to. We set 100 Longworths in lines of 10 in roadside Bramble & Undergrowth in Ballinacourty Wood. We then cooked our dinner at the picnic area near the statue on the north



Journal

side of the Glen. We found a nice place to camp at a picnic area opposite the north (avenue) entrance to Aherlow House Hotel. In the evening we went in to Tipperary Town and had a few nice pints of Guinness in the Kingswell on Bridge St.. We were watching the 1st Irish Cycling Grand Prix on TV when we were verbally assaulted by two raunchy Tipperary 'ladies'. After realizing that I had never before come so close to punching a woman in the face, we decided to wait for the end of the race, finish our drinks and make a prudent exit. We set up our tent in the dark at the picnic site opposite the north entrance to Aherlow House Hotel.

Aug. 15

We got up early and went off to check all the longworths but trap success was very low. I took down the tent (unauthorised campsite although we had permission) while Cathy cooked a terrific breakfast. We took a break at 10am and went on a hike up to the Carrigreenina Viewing Point from our Gortavoher Picnic Area Base. The view to the north out over Tipperary town and the surrounding countryside was spectacular. We set 50 Museum Specials in Gortavoher Wood in the afternoon. We stuffed the few voles we got and went to the Kingswell again in the evening to find out about those two aggressive amazons we met last night. The spoiled daughters of a local





Journal

big wig apparently. We didn't stay long however but instead drove to Aherlow House Hotel where we had great, but expensive (£1.20/pint) Guinness, and looked out over the Glen of Aherlow for the evening. It was a beautiful site: forested valley sides, and the small green fields of the glen floor were surrounded by tall, dense hedges - rows of Hawthorn.

2, Aug. 16

I got up around 6am to check the Museum Specials, and I had all the catch skinned and tagged before Cathy got up. We then proceeded to lift all the longworths and had ~~all~~ cleared everything by 12 noon. We detoured on the way back to Galway to take in the Rock of Cashel an ancient monastic ruin high on a rock over the Golden Vale of Tipperary.

Total

Catch in: Ballinacorney Longworths Gortawher Specials

<u>Apodemus sylvaticus</u>	22	6
<u>Clethrionomys glareolus</u>	12	2 + Eater Remains
<u>Sorex minutus</u>		3 + Tail
<u>Erithacus rubecula</u> (Robin)		1

Low trap success for Clethrionomys probably a combination of the usual summer low in vole numbers, and maybe some effects of this summer long drought.



JournalSagehen Creek Field Station, Nevada Co, California.

Sept. 28

Got bus across the Bay to San Francisco State Univ where I got a ride with Katie Martin and her husband to Sagehen. Katie is in Sam Parkes's Plant Ecology Class and all went on fieldtrip. We left the Bay Area around 3pm, we stopped east of Auburn at a Burger & Whole Foods Place for lunch, and arrived in Sagehen around 7.30 pm. Stocked up on provisions in Safeways in Truckee before hand. Mike & Mary Joder Williams were away on holiday and Diana Land from Davis was looking after the station. Intended to set some traps at the Upper Spring Site but it was too much of a hassle in the dark. Bunked down in one of the small cabins west of the station.

Sept 29

Bloody cold during the night so didn't venture out of my sleeping bag until 8am. After breakfast got some traps from the Fishery Hut and started work. Before lunch I laid 14 traps (baited with a mix of peanut butter & oatmeal) at the Upper Spring Site, and 8 more at "the Rockslide" north east of the station. Had a sandwich for lunch and then took 6 more traps to the lower Spring Site. Then walked for more than  $\frac{1}{2}$  hr west & then south.



Journal

of the field station to the south fork of the Sagehen Creek where there was much evidence of Beaver activity. Lots of damming and Aspen felled everywhere. Arrived there at 5 pm and sat down to watch the lodge nearest Sagehen (at Tan Seventeen? sign). At 6.30 pm saw 2 Beavers emerge, they seemed to know I was watching but one just ignored me, swimming around nose above water, and feeding nonchalantly on a recently felled Aspen. The same one had a tag in his right ear - (Ellen Woodard's study, UCB Wildlife Dept), he once came into shallow water immediately below me, stood up, and gazed straight at me before returning to his (?) felled Aspen. The other one spent most time going in and out of the lodge.

Returned to the field station in the semi darkness and saw a number of Mule Deer bounding out of range.

10.10 pm

Went up to the Upper Spring Site to check on all 14 traps - Only got 1 Bushy-Tail, but got 2 Golden-Mantled Ground Squirrels and a Chipmunk. The bait was gone from all traps so rebaited with leaves of lettuce. Didn't check lower Spring or the Rockslide.



Journal

Sept 30

Got up 6.30 am and after a cup of coffee went out to check the Spring Sites traps with Diana Land. I was surprised to get nothing at the Upper Spring Site although the lettuce had been eaten in some traps. However at the Lower Spring Site, I got four animals (one already tagged #2205), remember that line <sup>of 6</sup> was set c 3.30-4 pm so chances of all bait being eaten by mice or chipmunks was slim. Thinking of rebaiting again in the late afternoon but its threatening to rain here.

#2205 ~~was~~ <sup>is</sup> the ♀ I released at the Upper Spring on April 21. Weighed, sexed and tagged the other four animals.

Ear Tag No.	Sex	Wt	Site
2205 (recap.)	♀	280g	L. Spring
2170	♀ <del>♂</del>	265g	U. Spring
2169	♂?	175g	L. "
2173	♀	180g	L. "
2171	♂	345g	L. "

#2171 appears to be an old battered ♂, one upper incisor broken, Toes 1, 2 & 4 on Back left foot missing. Released all five animals at site of capture (within site) at about 4.30 pm. Intermittent rain and light snow showers, so lifted all traps by 7 pm.

Oct 1

Got Greyhound back to Oakland (\$19) 5 hr Journey.





Journal

Oct. 26

Sagehen Creek Field Station, Nevada Co., CA.

Left MVZ with Dave Goode and Cathy about 1:15 pm and we arrived in Truckee by 4:15 pm. Got some food in Truckee before continuing north on Hwy 89 to Sagehen. Mike & Mary Guder Williams were away for the weekend, but Bruce Johnson was up from Davis doing some seed predation experiments. We collected 25 Chipmunk Traps ( $16" \times 5\frac{1}{2}" \times 5\frac{1}{2}"$  with  $1\frac{1}{2}"$  mesh) from the Fish Hut and set 10 at Upper Spring, 6 at Lower Spring, and 9 at the Rockslide. Some light rain falling throughout the evening, worried about leaving traps open all night long. Back at the station Cathy cooked a delicious bolognese for dinner.

At 8:30 pm we ventured out to check all 25 traps and got 2 rats at the Upper Spring and 2 more at the Lower Spring.

At 10 pm checked remaining 21 traps again, got one more bushy-tail at the U. Spring. Light Snow starting to fall, so closed any traps that were not well sheltered (6 in all, 14 left open).

t. Oct. 27

7:30 am. Cold, clear morning. Frosting of overnight snow. Checked open traps at U. Spring (5) and Rockslide (9) and got one Woodrat at U. Spring. Spent the morning taking blood from toeclips.



# Journal

but sedated the animals first with Metofane (Methoxyflurane) an inhalent anesthetic from Pitman-Moore, Inc., Washington Crossing, NJ 08560. Administered thro' a cotton filled funnel while the animals were restrained in the bottom of a bag having  $\frac{1}{2}$ " mesh netting at the bottom. The first five animals were no problem but the last one (from U. Spring) died after treatment with Metofane. All animals were sexed, weighed and ear-tagged before toe-clipping.

In the afternoon we decided to trap some other rockpiles along Hwy 89. Could not find anymore chipmunk traps so used the larger Tomahawk traps (20" x 7 $\frac{1}{2}$ " x 7 $\frac{1}{2}$ " with 1" mesh).

Set 6 Traps at	X 89	(across Hwy 89 from Station)
" 3 "	" "	Mile 3.7 (Mile Marker along Hwy 89 → Sierraville)
" 6 "	" "	Mile 4.2 ( " " " " " )
Reset 9	" "	Rockslide
Reset 4	" "	Lower Spring
Set 10 (MORE)	" "	Upper Spring

(40 TRAPS IN ALL)

(E.) Mile 3.7 & 4.2 are rockslides on the right hand side of Hwy 89 toward Sierraville 3.7 & 4.2 miles from the Sierra Co / Nevada Co border.

830 - 10pm: Cold Clear Evening. Checked all 40 traps. Got 1 bushy-tail at Mile 4.2, heard the trap closing while on the Rockpile, which was lucky because although weighing 240g she was able to squeeze out



Journal

between the trap door and the trap side. Luckily we had a bag over the entrance. Also recaptured # 2205, the old ♀ at Lower Spring, for the 2nd time.

Oct. 28 The clocks were put back one hour last night because of the change to winter time. So from 6.30-8am we checked and lifted all remaining 38 traps but we got no more woodrats. This was probably due to trapping out at the Spring Sites and some escapes <sup>(some were closed but empty)</sup> from the larger traps along Hwy 89 sites. Also we got no rats at the Rockslide although Ellen Woodward released an adult ♀ (# 94) and her three subadult offspring (#s 91, 92 & 93) there a week or so after I gave them to her on June 16. The big old ♂ (# 2171, 345g) which I trapped at the Lower Spring on Sept 30 also seems to be gone - I should have taken him for tissues then.

So we got 8 bushy-tails in all:

Upper Spring -	1 ♂ 4 3 ♀♀
Lower Spring -	3 ♀♀
Mile 4.2 -	1 ♀.

We need some animals for tissues as well as the one which has died already. So decided to kill the Mile 4.2 ♀, and the oldest & youngest ♀♀ from Lower Spring (used Chloroform). Released the remaining four animals at the upper spring (#s <sup>♂</sup> 2176, <sup>♀</sup> 2170, <sup>♀</sup> 2177, & <sup>L.S. ♀</sup> 2174).





## Journal

Procedure for taking tissues: Kill animals in chloroform killing pot. Take measurements - HB, Tail, H. Foot, Ear and Wt. Sex & Repro. Cond.. Open Cavity by longitudinal incision from pelvis to sternum. Separate skin from peritoneal muscle. Cut away large oval patch of peritoneal muscle. Remove alimentary tract onto <sup>Paper</sup> tissues without soiling the coat. Add a drop or two of Heparin to the body cavity to prevent coagulation. Remove one kidney, part of liver, piece of skeletal muscle and heart & freeze in labelled nuc tubes. Collect all blood with a heparinized pipette and transfer to 2 heparinized conical centrifuge tubes and leave on ice until ready to spin down a batch. Clean out the body cavity and pack with paper tissues. Label the carcass, place in a plastic bag and freeze.

Bushy-Tails killed for all tissues:-

7	PK 109	♀ (#2178)	U. Spring	Metofane Overdose, Oct 27	250g
8	PK 110	♀ (nullip.)	Mile 4.2	333 - 146 - 43 - 32 = 240g	
28	PK 111	♀ (parous)	#2805 L. Sp.	326 - 117 <sup>* CUT SHORT</sup> - 43 - 35 = 320g	
28	PK 112	♀ (nullip.)	#2169 L. Sp.	315 - 133 - 44 - 32 = 172g	

Yagged Bushy-Tails at Sagehen

Ear Tag #	Sex	Wt.	Location	Released	Captured	Toe Clip.
2207	♂	420g	U. Sp.	April 21, '84	(K. 10/28/84)	
2205	♀	(?, 280g, 320g)	(U. Sp., R. Sp., L. Sp.)	4/21/84	9/30/84, 10/27/84	
94	♀		U. Sp., R. Side	c. 6/16/84	4/20/84	0002
91	( <sup>Samir</sup> subadult)		R. Side	c. 6/16/84		0005



Journal

Ear Tag #	Sex	Wt	Location	Released	Captured	Toe Clip.
92	<sup>born in lab</sup> (subadult)		Rslide	c. 6/16/84		0004
93	"		"	"		0005
2170 <sup>x</sup>	♀	265g, 255g	U.Sf.	9/30/84, 10/28/84		0010
2171	♂	345g	L.Sf.	9/30/84		
(formerly 2173) 2174 <sup>x</sup>	♀	180g, 215g	L.Sf., U.Sf.	9/30/84, 10/28/84		0005 (2nd One)
2176 <sup>x</sup>	♂	335g	U.Sf.	10/28/84		0012
2177 <sup>x</sup>	♀	210g	U.Sf.	10/28/84		0013

Things I've learned on this trip. The best traps are the smaller 16' Chipmunk-sized Tomahawk Traps. Blood sampling from the toes can be difficult and time consuming - may be better to learn how to do heart punctures. Also conical tubes are probably better for spinning down blood samples.



P. A. Kelly

1985

Journal

California



P.A. Kelly

1985

## Journal

Jan. 25

Berkeley Aquatic Park, Berkeley, Alameda Co.,  
California.

First 107 fieldtrip of 1985. Led by Ned Johnson, Claudia Luke, Beth Braker, Jeff Groth and Myself. We met about  $\frac{1}{2}$  the class at 8 am at the Park and split them up into four groups of about ten each. Ned came along with my group since I do not yet know all the American birds. It was fairly overcast all morning and temps didn't rise above 50°F. Despite the close proximity of Interstate 80 there were still a lot of birds to be seen but mainly ducks & waders of course. Most of the students had never been bird-watching before so I had no problem teaching them. We saw Eared Grebe, Pied Billed Grebe (many), Black-crowned Night Heron, Snowy Egret, Great Egret, Mallard (few), American Widgeon, Northern Pintail, Ruddy Duck, Canvasback, Redhead, Greater Scaup, Surf Scoter, Common Goldeneye, Bufflehead, Red Breasted Merganser, American Coot (many), American Avocet, Killdeer, Black-bellied Plover, Willet, Greater Yellowlegs, Dunlin, Least Sandpiper, Ring-billed Gull, Herring Gull, Forsters Tern, American Kestrel, Mourning Dove, Anna's Hummingbird, Bushitit.

Returned to campus at noon.





Journal

May 19

Pisgah Crater, San Bernardino Co., California

The optional 107 field trip to the Mojave Desert started at 7am at the MVZ loading dock. 22 students and 2 TAs prepared to head south on I5 to join Harry Greene & Claudia Luke at Pisgah (also John Carothers & Johnathan Coors). Unfortunately I also had to bring bad news to Harry: that his Dad died last night from a heart attack.

The students divided up the food supplies & equipment between cars. I travelled with Jeff Groth who was en route to Arizona to collect some cross-bills. I brought my <sup>10</sup>~~20~~ Tomahawk Chipmunk traps and 40 Shermans to introduce the students to desert mammals, and also to collect some Perognathus for Jim Patton.

We left MVZ at 8.10am and arrived at the Pisgah "Hilton" (see Claudia's Notes) around 5pm after a few leisurely pit stops. The whole group arrived by 6pm. Harry was naturally upset regarding the bad news from home. He phoned his mother, & DBWhe, and made plans to fly to Texas from Palm Springs in the morning.

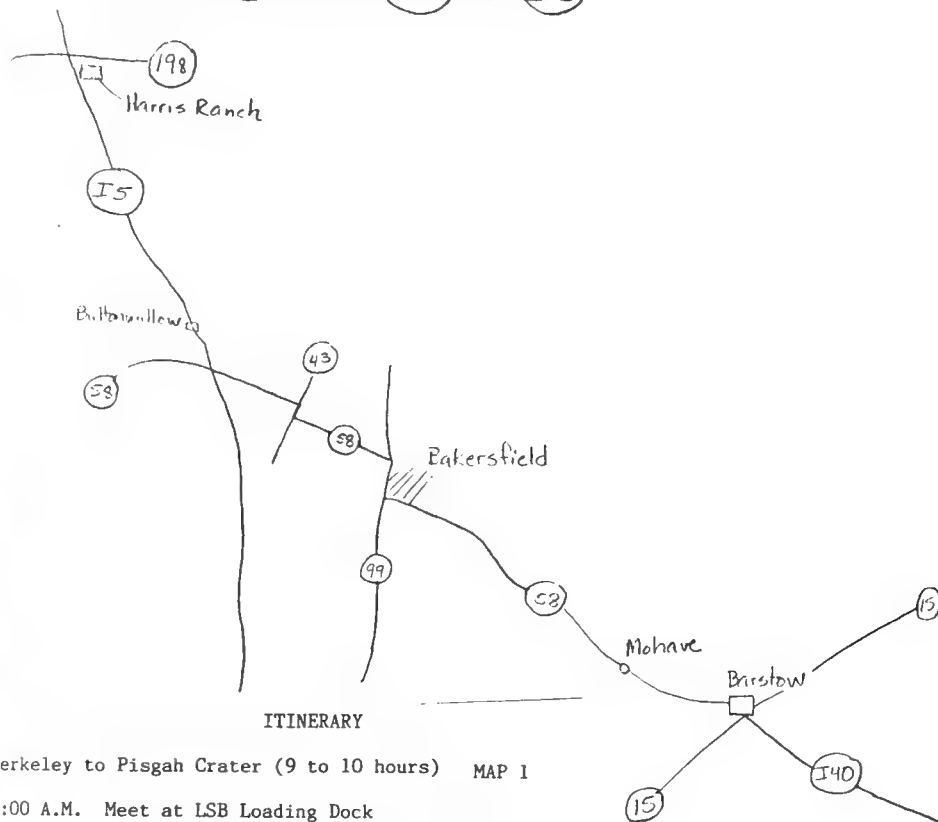
At 6.30pm I recruited some volunteers and we set all 50 traps near the camp. The 10 Tomahawks in cracks in the lava





Berkeley

Take (13) to (580) and (580) to (I5)



# ITINERARY

19 Berkeley to Pisgah Crater (9 to 10 hours) MAP 1

- 7:00 A.M. Meet at LSB Loading Dock
- Pack up and leave as soon as possible.
- 6:00 P.M. Dinner at the Pisgah Hilton
- 7:30 P.M. Nightdriving for those interested.

20 Pisgah Crater

- 7:00 A.M. Breakfast
- Explore Lava Flow
- 12:00 P.M. Lunch
- Drive up powerline road to southern rim of valley, Sunshine Mtns.
- 5:30 P.M. Dinner
- 7:15 P.M. Nightdriving on National Trails Hwy.

21 Pisgah Crater to Granite Mountains MAP 2

- 7:00 A.M. Breakfast
- 8:00 A.M. Drive to Kelso Dunes
- Arrive at 9:30 A.M. and explore dunes
- 12:00 P.M. Lunch at Kelso Dunes
- 1:00 P.M. Drive to Sheep Corral MAP 2
- Explore
- 6:00 P.M. Dinner

22 Granite Mountains to Argus Mountains

- Sunrise: Bird Watching - optional
- 6:00 A.M. Breakfast- Pack a Lunch to Eat in the Car
- 8:00 A.M. Leave for Argus Mountains MAP 3
- 2:00 P.M. Hike to Darwin Falls
- 5:00 P.M. Return from Falls
- 5:30 P.M. Dinner
- 7:15 P.M. Nightdriving

23 Argus Mountains to Home

- Breakfast
- Leave for Home MAP 3

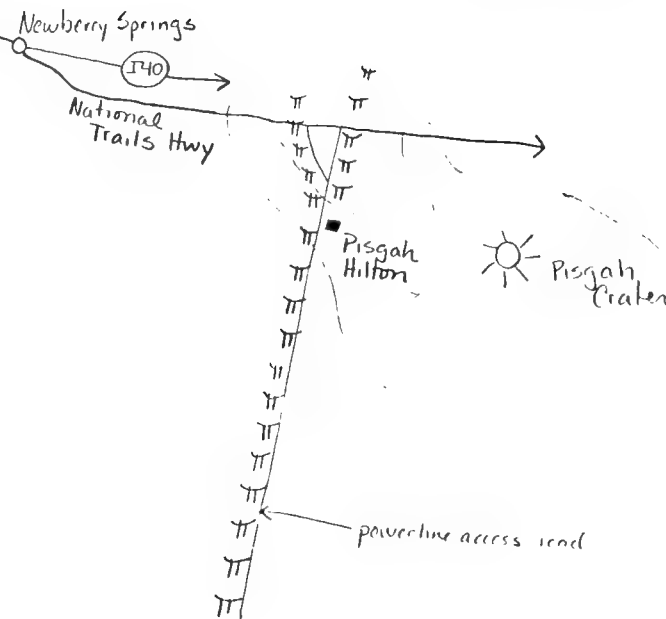
## MAP 1

Straightforward from Berkeley to I5. Harris Ranch (exit 198, on left) about 115 miles past the intersection of 580 and I5, will come up around lunch time, and is the only place in I5 which doesn't serve American Cheese. Takes a bit longer than other fast food but can be worth it.

From I5 follow signs to Bakersfield which will take you onto 58 (77 miles past Harris Ranch) and will lead you through the jog onto 43 and off again. Stay on 58 around the edge of Bakersfield and continue on 58 to Barstow (130 miles). 58 will dump you onto Barstow's main street. Turn left following signs to I40. There is a Safeway store on the left to buy last minute supplies and to fill up water canteens. Fill up gas tank.

Follow this main street to the overpass (where I40 crosses over the main street). Take an immediate sharp right onto the on-ramp to I40 going east. Take I40 to the Newberry Springs Exit (18 miles). Turn right. This puts you onto National Trails Hwy. Go about 15 miles until you see a large powerline crossing the road. Turn onto the nearest dirt road heading south. After 1.9 miles the road enters the lava flow. 2.9 miles from National Trails Hwy. on the powerline road is the Pisgah Hilton.

Sleeping Beauty Mtns.



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## Journal

and the Shermans under Sagebrush and Creosote. The cooking crew put together a chili dinner. Caught one antelope ground squirrel (Ammospermophilus) before dark. Then for about 2 hrs we went snake driving along the National Trails Hwy (south of I 40). Most sane people hit the sack by 11 pm after a long day.

May 20 Got up at 5.30 am and checked all the traps. Surprised to find lots of desert woodrats (Neotoma lepida) in both kinds of trap (about 10, 20% occupancy). Also lots of kangaroo rats mainly Dipodomys merriami also one Dipodomys microps. Also had 4 Peromyscus but only two Pocket mice (Perognathus formosus and P. longimembris). Closed all traps at 8 am to prevent trap deaths due to heat stress.

We broke up into four groups and scouted the lava flow for lizards and snakes. Some chuckwallas, whiptails and side-blotched lizards were caught. But our group only caught one horned lizard Phrynosoma.

We returned to camp at noon for a sandwich lunch and tried to get some





## Journal

relief from the glaring sun by hiding in the old mine-shaft or the dilapidated "Hilton" Tin Shack. Low-flying air force jets added to our frustrations. I have never experienced such heat: drank a lot of water, put on lots of sunscreen, and hung a bandana from my hat for neck protection. After our siesta (c. 3pm) we drove along the Powerline dirt track for 7 miles to the top of the ridge & split up into groups again. No lava up here but lots of yucca. However reptiles were very hard to find.

In the evening we reset all the traps near the camp. Someone lit up a camp fire and with the help of Claudia's guitar we had some entertainment.

May 21

Got up again at 5.30am feeling hot and grubby. Checked all traps with similar results to yesterday but with only one more P. formosus.

At 8am we left Pisgah, as we found it, and drove east on I-40 and then north on Kel-baker Rd to Kelso Dunes. We arrived at the Dunes around 10am, most of the group liked to the top for the thrill of sliding down again. Meanwhile I wandered around the margin between the Dune "grass" and



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## Journal

creosote - sage brush. Saw lots of fringe-toed lizards speeding across the sand to refuge in Pipodomys deserti burrows. Also found a large desert iguana Pipsoaurus for Jonathan to noose. We all returned to the cars for a wonderful fresh together lunch, the water melons were especially welcome. We then headed south again on Kel. Baker Rd to Sheep Corral at the Granite Mts. Incredible place with huge blocks of granite surrounding sandy washes and more Creosote - Sage Brush higher up on the slope. Lots of woodrats, jack rabbits and cottontails about. Also saw black chinned sparrows, gambel's quail (4 chicks) and one very large rattlesnake.

Around 5pm Rabiya Tuma volunteered to help me set the Sheermans for some more Perognathus. Then a group of 11 of us hiked a mile across the desert for a wonderful dip in a big cattle trough (10ft deep & 8 across). Really made up for the past 2 hot & dusty days. Then spent an hour or so being taught the rudiments of soft ball by Jonathan Coso, Maria Coso, Matthew Colbert & Erin Hughes. The



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## Journal

food committee excelled itself again with a big dinner of burritos.

1 May 72

Got up at

5:30 am and checked all the Shermans. Lots of Neotoma, Dipodomys, Peromyscus, but only one Perognathus longimembris. Collected all traps, we cleared up the camp site, had breakfast, made pack lunches and left for Darwin Falls (Argus Mtns) by 8 am.

May 22

Darwin Falls (c 4 mi W Panamint Springs) Argus Mtns, Inyo Co. CA. We arrived at Darwin Falls after the harrowing experience of passing through Teona (Tonauma) and getting intimately acquainted with the road-surfacing techniques of Inyo Co. Council. All cars got covered in a gooey, oily tar-based mess while Tom Wake had the misfortune of rear-ending a badly sign-posted road vehicle in a dust cloud. One car (2 students) got lost & didn't arrive in time - some people don't know how to read plain instructions. John Carothers waited for the 2 absentees while the rest of us began the precipitous hike up the creek bed to the falls. I had a few scary moments trying to get foot holds





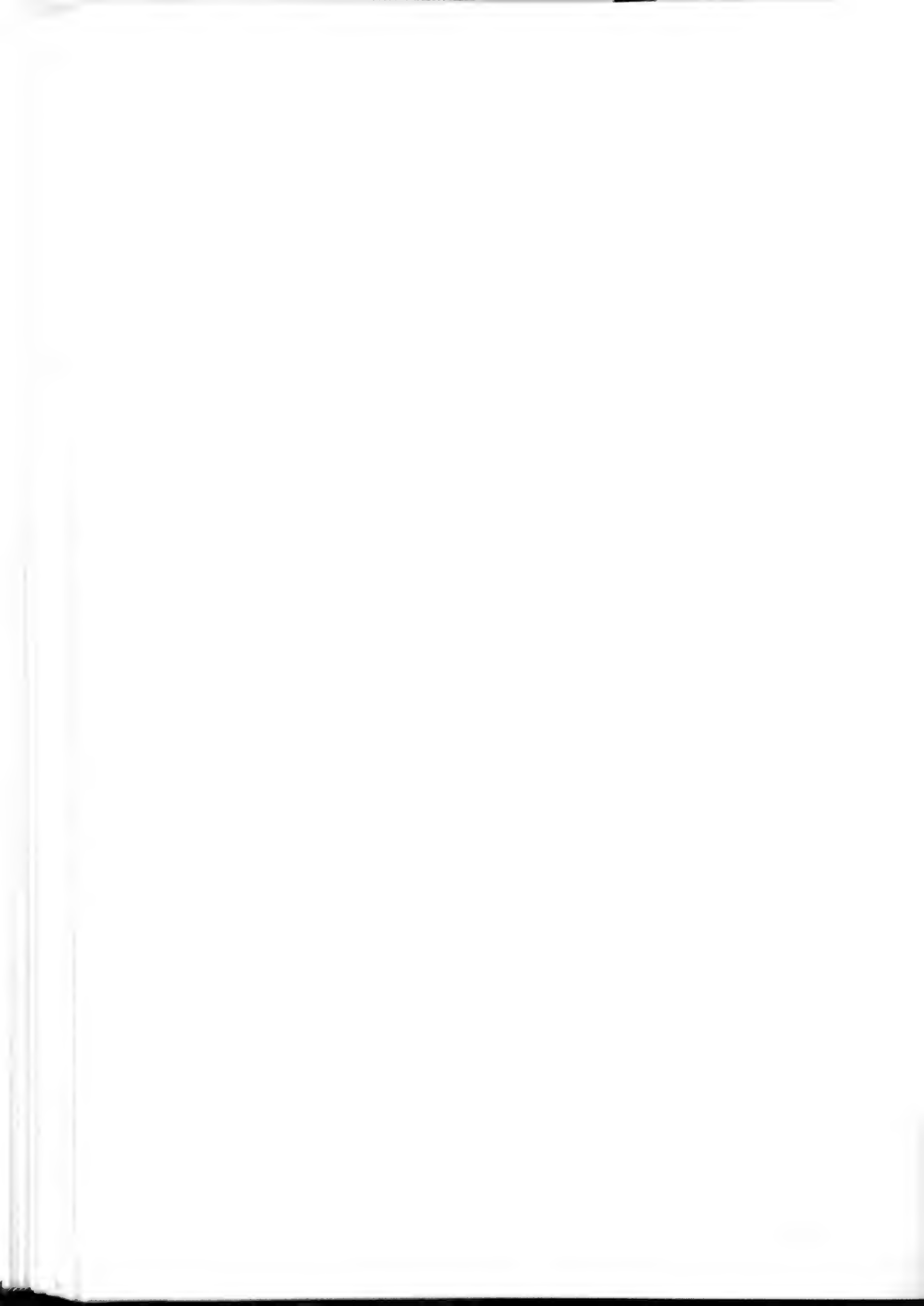
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## Journal

(old)  
with my injured left leg on the way up. When we eventually got to the top we were greeted by the 18 yr old "assistant manager" of Darwin Falls who asked us not to use soap since Panamint Springs use the water for drinking. Fair enough. The deep pool of previous years however had silted up so everybody resorted to standing beneath the punishing cascade. We found an easier way down the mountain and cooled off in another pool on the way. When we got back down I was horrified to realize that the four live Perognathus had been left in the car for much of the afternoon. They all died from heat stress. I felt terrible, what a waste. Some of Johnathan's lizards, a Sceloporus magister, Cnemidophorus and one Pleurosaurus also died. Six volunteers helped me to set the 40 Shermans along the creek bed. Somebody also found a worm snake - what a beauty. Betsy Mitchell and Wayne Sousa joined the group at dinner time. We then had an impromptu game of softball in the wash using a big hunk of creosote as a bat. Drank beer and sang songs around the





Journal

camp fire until late.

May 23

Got up at 6am and checked & collected all 40 traps. Lots of Neotoma again and thankfully also had one more Perognathus formosus for Jim. Put the other four dead ones in a cooler for later preservation.

After breakfast we cleared up camp, burned all the rubbish, said our goodbyes to each other. Claudia headed back to Pisgah with Wayne & Betsy. Carollee, Loro, and I headed north on 395 through the Owens Valley. We stopped in Bishop for refreshments (shakes) and then continued north to Mono Lake where we had one last swim, <sup>a wash</sup> in creek which feeds snow melt into Mono Lake. We then headed west over Tioga Pass into Yosemite Park and Tuolumne Meadows. The scenery was spectacular, saw one well fed or coyote Canis latrans against a magnificent backdrop in Tuolumne Meadows. Stopped for food, a snowball fight and some soft ball at a 9500ft parking area. Poked on through the Park, across the Central Valley through Oakdale and arrived back in Berkeley around 9pm.



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## Journal

June 2 Sagehen Creek Field Station, Nevada Co., CA

Left Berkeley at 7.30 am and arrived at the Field Station at 11.30 am after stopping for breakfast in Auburn. Driving conditions were fairly good except for occasional light mist showers in the coast range and in the Sierra. Mike Godee-Williams was away so I was fixed up with cabin and lab space by Kimberley (?) (working on Mike Harrison's Bird Study).

Started setting traps after I had unloaded everything. There was a light snow fall last night but it thawed rapidly. First went to the Upper & Lower Spring Sites - lots of Aspen in leaf and lots of woodrat sign. Set 10 traps (Chipmunk Size, 16") at U. Spring & 5 at L. Spring. Also lots of Marmot droppings on the rockpiles as well as Beaver Sign (chewed Aspen) at L. Spring. Then saw my first Yellow-bellied Marmot near Leopold's Cabin. Also some Douglas Squirrels around. Went on to the "Rockslide" Site, found no fresh woodrat sign throughout the area, but fresh Beaver sign was everywhere. Set 3 traps in hope of catching vagrants.



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## Journal

Then at X89 site I set 7 traps among boulders at the base of the hill. Found fresh carnivore scat. Hiked up to the 2 big rock outcrops at the top of the hill. Very little woodrat sign and no fresh sign. Saw a ♀ Mule Deer however as well as some Green-tailed Towhees. Around 5pm checked all traps to release 3 Golden-mantled Ground Squirrels, 1 at X89 and 2 at U. Spring.

Checked traps again at 10pm. [It's great to have a car on this trip (as opposed to previous ones) even if it's a gas-guzzling Mercury Comet V8]. Got 2 rats at the Upper Spring:

# 2174 ♀ right side of rockpile

# 2177 ♀ (lar) left " " "

So at least these 2 have survived the winter. Didn't check Rockslide or X89.

June 3

Got up at 5.45 am. Beautiful sunny morning. Checked all traps:

U. Spring: # 2174 again r. side

# 2176 ♂ l. side

h. Spring: lge ♂ # 2179 (410g) toe 0014

Rockslide: Nothing

X89 : Nothing

Closed all traps for day to minimize





# Journal

ground-squirrel capture.

In the afternoon tried to find Escherich's "Stream" Site on the north side of Leopold's cabin but no luck. Instead I lifted the 3 traps from the "Rockslide" and 5 from the L. Spring and relocated them through out the U. Spring (18 traps in total). Then laid four (4) Havaharts at the L. Spring - the Station's supply of 16" Tomahawk traps apparently has been moved back down to Berkeley. Good job I brought my own supply of 25 Chipmunk Traps with me.

late afternoon, I reset the 7 traps at X 89<sup>\*</sup> but also set a huge Tomahawk for an apparent resident carnivore (badger?). Baited it with a tin of cooked beef from the back of the kitchen cupboard.

As the night stayed dry and not too cold, decided not to do a late-night trap check and instead hit the sack early.

Got up at 5.15 am & checked all traps.  
U. Spring: # 2174, # 2176, # 2177 & 2 Ground Squirrels  
L. Spring: Nothing  
X 89 : Nothing

Released ♂ #2179 at the L. Spring and proceeded to collect all the traps. Found a large Garter Snake (Thamnophis sirtalis)

a Beechey  
round Squirrel  
- base of hill  
near Lge Boulder

is, June 4



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## Journal

at the L. Spring. Seems there are currently only 4 woodrats in the vicinity of the field station. After lunch I went to Truckee to stock up on gas & supplies. Then from 3.30 - 7pm set all my 25 chipmunk traps at rockpiles (Mile 4.2, M. 9.4, & M. 9.7. - see Escherich's thesis). Set 10, 5 & 10 respectively, although in nearly all cases the woodrat sign was old. Also checked out Mile 12 (near Sierraville). Saw 2 Red Tails (Mile 9.7 - M. 12) and also some Calaveras Warblers at Mile 9.7.

June 5 Got up at 6am & drove north on Hwy 89 to check all the traps. Got nothing at Mile 9.4 & Mile 9.7 but got adult ♂ & ♀, and two subadults at Mile 4.2.

Took the 4 animals back to the Field Station for Sedation, Weighing, Ear-Tagging and Blood Sampling. Used Metofane (Methoxyflurane - Pitman-Moore Inc) Inhalation Anesthetic. Would prefer a faster acting inter-peritoneal injection of Avertin or some other harmless anesthetic. Put in toe clips in case of loss of ear tags, also took 8-10 hematocrit tubes of blood from the toes.



Journal

<u>Mile 4.2</u>	<u>Ear</u>	<u>Toe</u>	<u>Sex</u>	<u>Wt</u>
<u>Animals</u>	2180	15	♂	390g
	2181	21	♀ loc.	260g
	2182	22	♀ ?	115g
	2183	23	♂ ?	110g

Released all four again at 5 pm on the Mile 4.2 site. Animals were released of course at site of capture. Then reset 15 traps at Mile 4.2 and 5 at Mile 3.7.

on June 6 lifted all traps between 6.30 & 7.30 am. The night was very mild. In actual fact Sun. night was the only really cold (& wet) one I've had on this trip.

At Mile 4.2 I caught 4 Golden-Mantled Ground Squirrels as well as #2180, #2181, #2183 and another unmarked subadult ♀. The 2 adults (2180 & 2181) were recaptured much higher up on the rockpile than yesterday. The ♀ (2181) grazed her snout badly on the edge of the trap. Only got 3 GM Ground Squirrels at Mile 3.7.

#	Toe		
2184	24	♀ ?	115g

Released at Mile 4.2 after lunch on way back to Bay Area. Need a better anaesthetic (intra-peritoneal), and ability to take blood by heart puncture. Also need to modify the handling bag.



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## Journal

June 15 Bodie State Park, 10 mi E. Hwy 395 (SE Bridgeport)  
Mono Co., CA.

Left MVZ at 6.30 AM and headed to Bodie via Hwy, 13, 580, 120, 108 and over the Sonora Pass (9624 ft). My old Comet just about chugged over the Sierra, had a stop for an hour to let her cool down though. Arrived at the Park 3.30 PM, met Jack Shipley (standing in for Brad Sturtevant - who I phoned last week). Said it was okay for me to set traps at the Noonday & Red Cloud Mine Tailings (about a mile south of the Ghost Town). Also said he hasn't seen any woodrats here, few pikas as well, but lots of <sup>yellow-bellied</sup> marmots, any Belding's ground squirrels. Checked out the 2 big Tailings and some small rock outcrops but saw no woodrat sign. I suppose it's not surprising since sage brush is the predominant plant here.

Decided to set some traps regardless. Set 12 around the base of the Noonday Tailing, & 13 around Red Cloud. While setting the traps a Golden Eagle passed overhead with a Cottontail (?) in its talons landed on summit of hill (2nd from right) south of Noonday Mine. Camped at Noonday, made dinner & hit the sack at 10 PM.





Journal

June 16 Got up at 5am; checked and lifted all traps. Didn't catch anything. Took some photos from the "Eagles" Hill and broke camp 8am. Called into the Ranger Station to tell them how I got on before heading north to Sagehen.

Sagehen Creek Field Station, Nevada Co., California

Arrived around 3pm after a hot & tiring drive up Hwy 395 to Reno and then I80 to Truckee & Sagehen. Checked in with Mike & Mary. At 6pm set 13 traps at U. Spring and 5 at L. Spring.

June 17

Got up at 6am & checked all traps:

Upper Spring - ♂ # 2176 - Battered

h. eye damaged

l. ear lacerated

♀ # 2177 lactating

2 subadults (prob. #2177's offspring).

# 2185 <sup>too</sup> 25 110g ♂? (released)

& (debilitated?) # 2186 30 90g ♀?

Lower Spring - ♀ # 2174 lactating

Spent some

time with Mike in the morning doing a transect of his Wyethia plots. We were also on the lookout for 2 possible falconers from



Journal

Davis who were searching for the Goshawk nest. Somewhere in the vicinity of Leopold's Cabin/Wash. In the late afternoon I set 5 Traps at the 'Stream Site' (10 mins hike up Leopold's Wash). Also wanted to set some traps at the 'Peaks Site' on the ridge above the station but a severe thunderstorm looked imminent (but didn't materialize). Around 10 pm reset 10 traps at U. Spring & 5 at L. Spring with Pam Saltwaterz (Mike's assistant). Also released # 2185 and the battered ♂ (# 2176), (2177 & 2174 were released immediately after identification in the morning).

June 18

Checked

traps at 6 am: Another beautiful morning.

U. Spring (10 Traps)

# 2176 & # 2177 again

also 3rd subadult # 2187 toe 31 95g ♀

L. Spring (5)

# 2174 again, and the big old ♂ # 2179

Stream Site (5)

Nothing.

No fresh sign there either so lifted all 5 traps. Saw 2 Stellar Jays mobbing a Gt Horned Owl on the way back down the wash c. 7.30 am.



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## Journal

Took blood from 2186 & 2187 in the morning. In the afternoon helped out with station chores. Around 6pm drove to Carpenter Ridge with Pamela Schwartz & John Slaymaker to check out rockpiles. Some impressive ones up there, didn't see any fresh sign, but didn't have time to check it out properly because of a looming thunderstorm overhead. After dinner reset 9 traps at the U. Spring.

June 19

Got up 6am to check the traps.

U. Spring: (9 traps)

# 2185, # 2177 & another

subadult # 2188      <sup>toe</sup> 32      115g      ♂

Just got the blood sample spun down as the electricity was cut off again. In the morning since I had little else to do just then, volunteered to look for the Goshawk nest with Veronica. We hiked along the north ridge by the Creek near the Leopold Cabin, we then worked our way back along the top of the ridge. Somehow or other we lost each other. I was a little worried in case she had taken a fall. I went back to the Station at 11.30am and at 12.30, Ellen Woodard & I took Ellen's 2 field assistants (Norma & Sal) with the 2 radios and searched for Veronica.





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## Journal

luckily she was not lost at all. However it was good practice for coordinating search procedures on difficult terrain.

In the early evening I reset 8 traps at U. Spring and 5 at L. Spring. Checked them again at 10.20 pm. / lac.

U. Spring: # 2188 (juv.) & # 2177 (♀)

L. Spring: # 2176, i.e. ♂ with damaged eye from U. Spring.

# 2174 (♀) — lac.

Also, set 15 traps with the help of <sup>Elley</sup> Woodard. ~~Swartz~~ at Mile 4.2

June 20 Got up at 6 am to check and close all 28 traps:

U. Spring: (8 traps) 2177 (ad ♀)  
2186 & 2187

L. Spring: (5 traps) 2174 (ad ♀)  
(no sign of either ♂ 2176 or ♂ 2179)

Mile 4.2: (15 traps) 2183, 2180 ad ♂ & 2181 ad ♀

Helped out around the station until about 2 pm, getting things organized for the Sagehen Research Symposium tomorrow. At 4 pm got help from John Slaymaker, Norma & Sal in setting traps. We set 5 across the stream from the L. Spring looking for ♂ 2176 & ♂ 2179, 5 at the Peaks Site high on ridge north of the station (but no.



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## Journal

fresh woodrat sign). On the way up to the Peaks Site we flushed a Nighthawk from her scrape of a nest on the ground. She had 2 young chicks (each about 2" long) and was back on the nest when we were coming down again an hour later. Took some photos. We also set 5 traps at X89. Then rebaited <sup>a reset</sup> the 20 traps at U.S.R. Spring with the help of Pamela.

June 21

Got up at 5am to check all 50 traps. At 5.15am I found & collected a <sup>dead</sup> adult ♀ porcupine 0.35mi north of the Nevada Co. line on Hwy 89 (PK # 118: Erethizon dorsatum <sup>Tot Tail HF Ear</sup> 790-280-95-35 = 9500g, ♀). I thought she was pregnant at the time since body was still warm and supple, but she was only bloated after her nights foraging. After the Sagehen Research Symposium, Ellen Woodard helped me to open her up and remove the smelly contents. Our audience of field assistants stared wide-eyed and 'nose-tied'.

Trapping Results:

Mile 4.2: (15 Traps) 5.30am

2183

2184

ad ♂ 2181 } Toes swollen, removed to  
2182 } field station for treatment.



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X 89 : (5 Traps) Nothing

U. Spring : (15 Traps)

2176 (ad ♂) back again

2188

2177 (ad ♀)

2185

2186

h. Spring : 2174 (ad ♀) (5 traps)

2179 (ad ♂) back again

X Stream Rocks : Nothing (5 traps).

Peaks Site : (5 Traps) Nothing.

lifted all

traps except for the 20 at the Upper & Lower Spring. The whole day was taken up with talks on various research projects at Sagehen. In the evening I car load of volunteers helped me to set the traps at the Spring Sites.

June 22.

Ellen & Norma joined me at 6.30 am to check <sup>about</sup> the remaining traps.

U. Spring (15 traps) 2177 ad ♀ & 2188

h. Spring (5 " ) 2174.

No ♂♂ or any of the 3 other subadults.

Packed away my gear, but left some at Sagehen). Then after breakfast hosed the Sagehen dust off the Comet and headed back to Berkeley. Got home at 1.30 pm.



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## Journal

Sagehen Creek Field Station, Nevada Co., CA

June 30 Set 15 traps at U. Spring and 5 at L. Spring  
Checked traps at 10.30 pm.

U. Spring (15) 2 GM Ground Squirrels

♀ # 2186

♂ # 2188

L. Spring (5) Nothing.

July 1 6am U. Spring (15) ♂ # 2176 l. eye completely closed & 'healed'

# 2185

# 2187

# 2186

♀ # 2177 lactating

L. Spring (5) ♀ # 2174

Slaymaker's (5) subad ♀ ear 2189

'Rockslide about 5 min hike north of road at Johnson's Cabin. Showed to me by John Slaymaker.

Around midday I found a dead subadult ♀ Marmota flaviventris near the Garage Apt. (Cat # 119, hickled). looked as if Sarah (Goder-Williams' dog) scuffed it. Measured 442 - 130 - 71 - 17 = 1000g.

Norma Kline helped me in the afternoon to set traps at Mile 4.2 (15), X89 (5) and the Rockslide (5) sites. We also reset traps at the U. Spring (15), L. Spring (5) and Slaymaker's (4). I also set a tracking plate at the U. Spring since





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I found what looked like a large regurgitated fur ball there last night.

July 2

7am Mile 4.2 (15) ♂ # 2180

♀ # 2181

# 2182 ♀

# 2184 ♀

& 2 new subadults juvs.

7.30am X89 (5) Nothing, lifted all 5 traps

Rockslide (5) " " " "

8.10am U. Spring (15) Chipmunk & GNGS

subad # 2185

♀ # 2177

♀ # 2186

8.25am L. Spring (5) ♀ # 2174

♂ # 2179

8.40 Slaymakers (5) Nothing.

lab ♀ # 2186, 140g from U. Spring removed tourniquet & treated infected toe.

♀ # 2189, 130g, Slaymakers, took 6 hematocrit tubes blood from ear

75g ♀, Mile 4.2, # 2190, toe 33, difficult to get blood so deferred.

80g ♂?, Mile 4.2, # 2191, didn't toe clip deferred bleeding.



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late afternoon I reset traps at Mile 4.2 (15),  
U. Spring (18), L. Spring (5) and Slaymakers (5).

10.52 pm U. Spring ♀ #2186

♂ #2188

ad ♀ #2177 (luc)

0 2 GMS

11.12 pm L. Spring ♀ #2174

July 3 5.30 am Mile 4.2 (15) 3 GMS

ad ♂ 2180

subad ♀ 2182

subad ♀ 2184

juv #2190

new juv (#2192) & didn't bleed.

6.45 U. Spring (18) ♂ #2185

♀ #2186

ad ♀ #2177

7.00 L. Spring (5) ♂ #2179

7.15 Slaymakers (5) Nothing lifted all traps.

July 4 5.30 am Mile 4.2 (15) 3 GMS

♀ #2182

lifted all 15

♀ #2181

juv #2190

U. Spring (18) Chismonks

ad ♀ #2174

ad ♀ #2177



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U. Spring (cont.) subad ♂ #2185

" ♀ #2186

" ♀ #2187

6.45 am. L. Spring (5) ♂ #2179

Headed back to Berkeley around 11. Unfortunately the car had a severe break down at Vacaville (dropped a valve & blew a large hole in the cylinder head) and I had to get towed by the AAA the last 50 mi home.

P.S. The engine was beyond repair so we sold the car at a loss, got a loan and bought a brand new Toyota long bed pick up truck on July 11.

### Sagehen Creek Field Station, Nevada Co, CA.

July 14

Drove to Sagehen with Cathy in our new pick up truck (Cathy took a week off from work at MVZ).

From 7-8.30 pm we set traps at U. Spring (12), L. Spring (5) and Mile 4.2 (11).

10 pm U. Spring (12) 2 marked individuals (#s ?)

4 new jaws (2 in one trap).

L. Spring (5) nothing.

July 15

6.30 am U. Spring (7) ♂ #2188 + new jaw (in one trap)

♀ #2187

♂ #2176 + 3 more new juveniles

ad ♀♀ #2174 & #2177





Journal

15 (cont.)

L. Spring (5) nothing

Mile 4.2 (11) ad ♀ # 2181

# 2190

ad ♂ # 2180

♀ # 2182

♀ # 2184

new subad. ♂.

Lab.

130g ♂, Mile 4.2, Ear # 2193, didn't toe-clih  
got 3 Hemo. Tubes Bl. from nicking vein  
bottom rear of l. ear.

♀ # 2190, 100g, Mile 4.2, didn't bleed last time,  
took 3½ tubes from l. ear.

U. Spring Animals.

♀ # 2187	170g	ear-tag soiled, released.
juv ♀ # 2194	85g	didn't bleed (same trap as # 2188)
" ♂ # 2195	95g	"
" ♀ # 2196	75g	"
" ♂ # 2197	75g	"
" ♂ # 2198	67g	"
" ♂ # 2199	75g	"
" ♂ # 2200	95g	"
" ♀ # 2217	85g	"

new set of tags

caught in  
same trap



Journal.

July 16 7.15am U. Spring (13) 4 GMGS

♂ # 2188

ad ♂ # 2179 (from L. Spring.)

# 2195

# 2199

# 2217

L. Spring (5) Nothing

Mile 4.2 (11) 3 GMGS

subad # 2182

juv # 2193

subad # 2184

July 17 6.12am U. Spring (16) 3 GMGS

ad ♂ # 2176

juv # 2195

subad # 2186

" # 2187

juv # 2194

L. Spring (5) ad ♀ # 2174 (loc.)

ad ♂ # 2179

Mile 4.2 (15) 1 GMGS

# 2190

ad ♀ # 2181 (loc.)

subad ♀ # 2184

" ♀ # 2182

ad ♂ # 2180.



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Journal

17 (cont.) Drove to Berkeley on urgent business but we returned to Sagerhen on July 18.

July 19 7.50 am U. Spring (16) 2 GHGS

juv # 2200

ad ♂ # 2176

juv # 2196

juvs # 2197 & 2198 (same trap)

ad ♀ # 2174 (loc)

juv # 2194

ad ♀ # 2177 (loc)

subad ♀ # 2186

juv # 2217

8.11 am L. Spring (5) ad ♂ # 2179

8.30 am Hile 4.2 (15) 1 GHGS

# 2193

ad ♀ # 2181 (loc)

subad ♀ # 2184

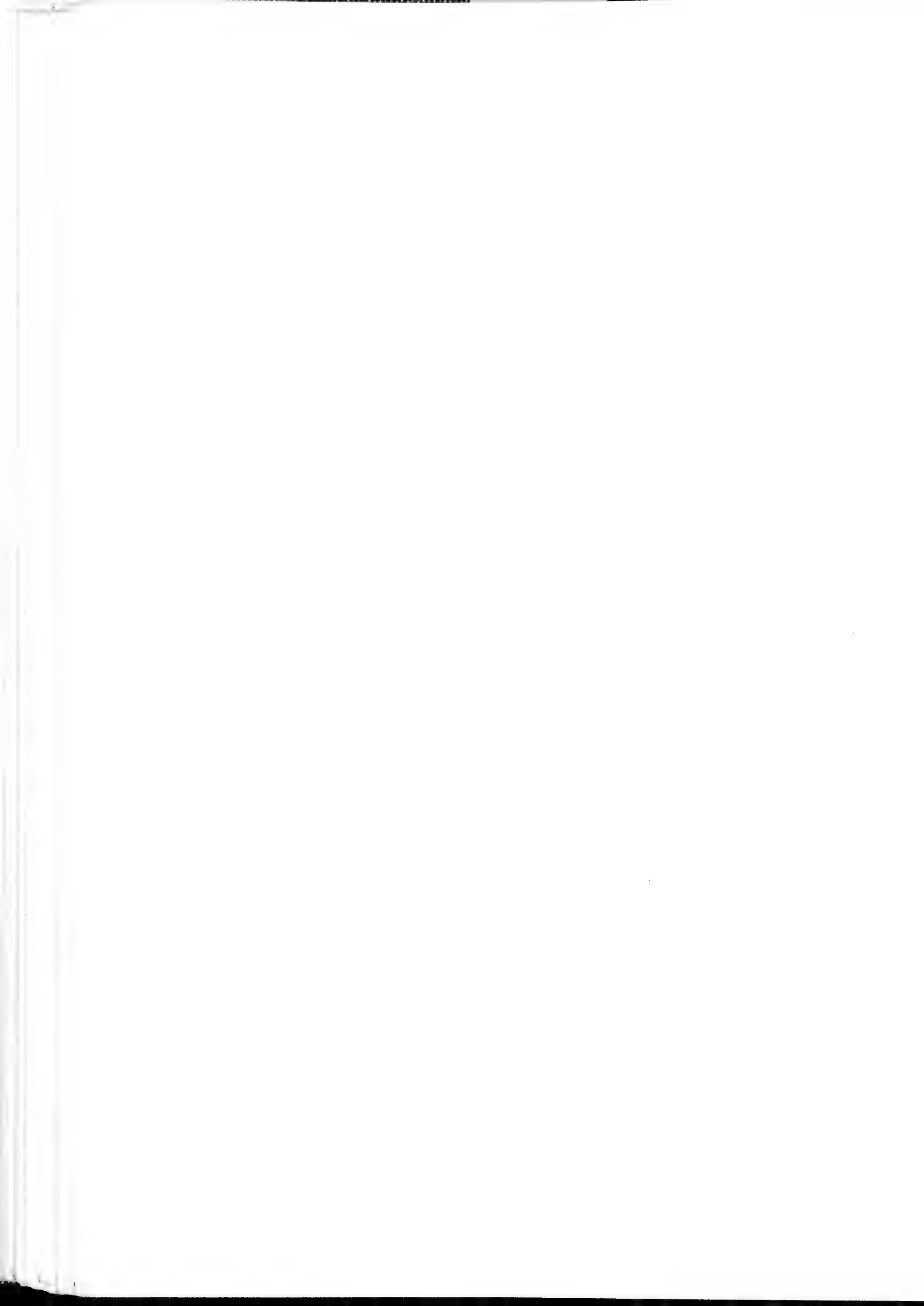
ad ♂ # 2180

subad ♀ # 2182

# 2190

new subadult ♀ (# 2218, immigrant?)

Did not reset traps on account of threatening weather.



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Journal

July 21 4.45 am got up to shut traps on account of heavy rain. No fatalities, trap results below

U. Spring (16) 2200

2199

2196

5 GMGS

Chippmunk

subad 2186

2217

2195

ad ♀ 2177

2194

L. Spring (5) ad ♀ 2174

Mile 4.2 (15) 3 GMGS

ad ♂ 2180

ad ♀ 2181

2182

2184

2190

July 28 Sagehen Creek Field Station, Nevada Co., CA.

10.25 pm U. Spring (15) 2 GMGS

ad ♀ # 2174

# 2217

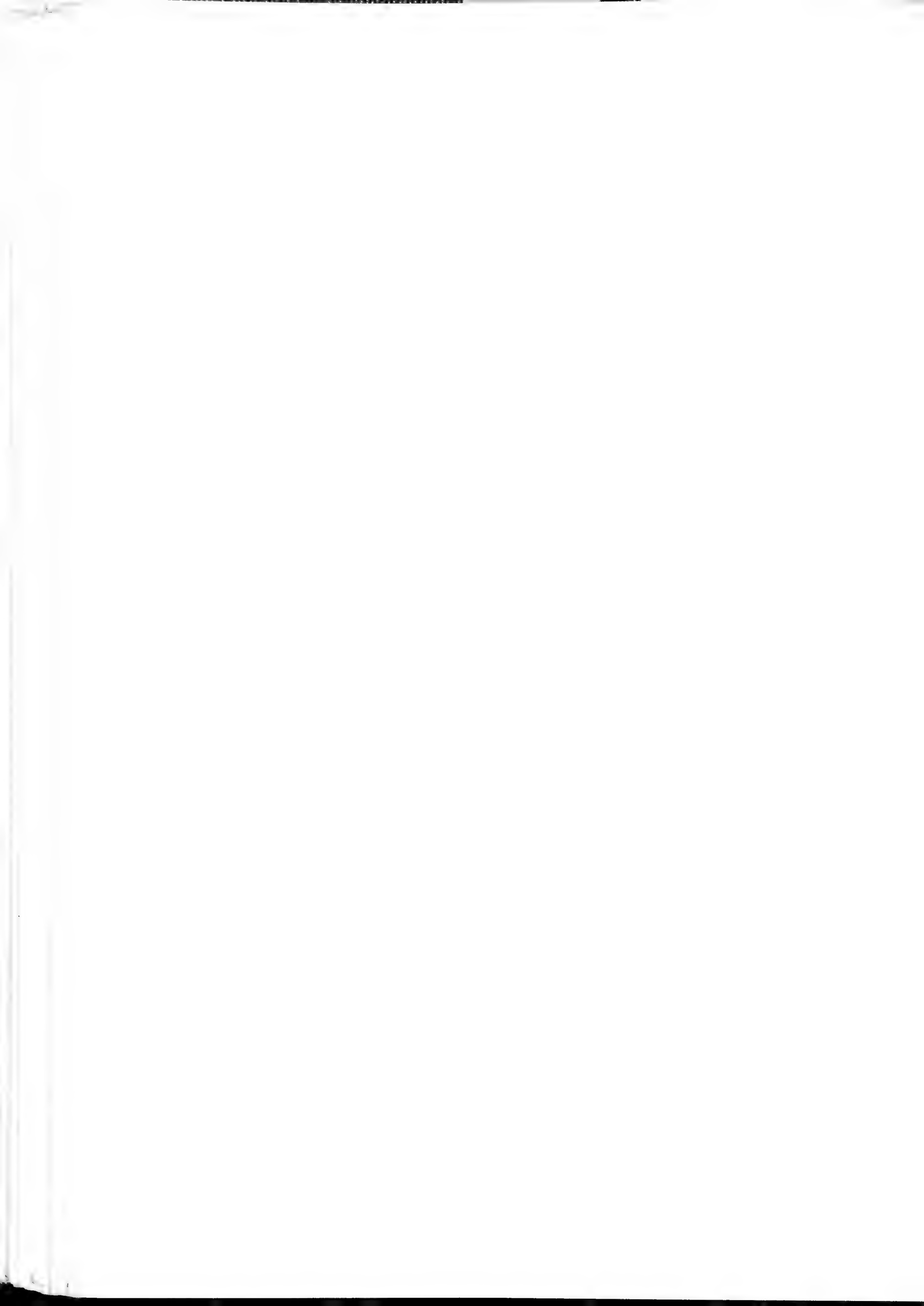
# 2194

# 2199 hypothermic

ad ♀ # 2177

L. Spring (5) ad ♂ # 2179





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Journal

July 29 8:21 am Saw a Goshawk chase a Golden-mantled  
Ground Squirrel near the Leopold Cabin

U. Spring (12) 2 GMS

#2196

#2198

subad ♀ #2187

#2195

ad ♀ #2174 loc.

L. Spring (5) nothing.

Lab #2199 became hypothermic in captivity  
Revived by warming + admin. honey + warm H<sub>2</sub>O.

♂ #2198 died Metofane overdose

230 - 90<sup>+</sup> - 39 - 29 = 95g "dipped tail.

so took all blood + some liver, lit, kid & muscle

♀ #2196, 95g, U. Sp., only got 2½ tubes  
blood from toes.

Gave up on lab work in frustration.

July 30 7 am U. Spring (9) ad ♀ #2174 (ran into another trap  
on release)

#2187

ad ♂ #2176

ad ♀ #2177

#2186

GMS

L. Spring (5) 1 Eutamias



Journal

30 (cont.) Also checked traps set on east & west side of Hwy 89 near Sierraville (Mile 12 site).

8.30 am Mile 12 (20)

1 lac ♀ w. of 89 (released immed.)

9.25 am Mile 4.2 (12) #2190

♀ #2182

ad ♀ #2181 lac

ad ♂ #2180

new juv #2220

lab.  $t = 5 \text{ mm}$

95g ♂ #2199 v. ill, diarrhoea (after sugar dosage yesterday?)

On Ann Brooke's suggestion & with her help & instruction (Viscachas H.P. experience with Lynn Branch) decided to sedate thoroughly & take blood via heart puncture.

injected 0.25 ml Rat Cocktail (see recipe) i.p.

After 10 mins took 1cc blood via H.P.

This technique is much more satisfactory than using hematocrit tubes. I used 1cc Tuberculin Syringe fitted with a 27 gauge  $\times \frac{1}{2}$ " needle. I heparinize the syringe prior to use. Felt for heart beat just beneath and about halfway along the sternum. Insert needle <sup>(obliquely under sternum)</sup> only 5-6 mm from r.h.s. of operator (rat, left) and withdraw 0.3-0.5 ml blood. Remove needle and transfer blood to heparinized microcentrifuge tube or eppendorf tube. V. little blood remained in the test animal (ie #2199).



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Journal

30 (cont.)

Lab (cont.) 4pm ♀ # 2217 + 0.2cc Rat C.

130g, took 0.35ml blood via H.P.

July 31

6.30am U. Spring (9) 2 GMS

ad ♀ # 2174

♀ # 2186

L. Spring (5) ad ♂ # 2179

8.30am Mile 12

E. of Hwy 89 (12) Nothing

W " (8) 220g ♀ # 2219

Took c. 0.3ml blood via H.P. in  
the field. (used Metofane)

10. am Mile 4.2 (11) 3 GMS

# 2184

# 2182

Lab.

♀ # 2194, 110g, U. Spr, + 0.05, + 0.05  
+ 0.15ml R.C.

0.35ml Bl. via H.P.

♂ # 2195, 115g, U. Spr, v. Hyper, + 0.2ml RC.

0.4ml Bl. via H.P.

♀ # 2220, 100g, Mile 4.2, + 0.15ml R.C.

0.4ml Bl. via H.P.

22, Aug 1

Tan.

U. Spring (14) 1 GMS

# 2196

ad ♀ # 2174

# 2217

# 2200





1985

Journal

1 (cont.)

U. Spring (cont.) ad ♀ # 2177 lac.

# 2186

L. Spring (3) ad ♂ # 2177

(Baron) X Creek (3) Nothing (lifted all 3)

Mile 4.2 (12) ad ♀ # 2181

♀ # 2184

♀ # 2182

ad ♂ # 2180

Mile 3.9 (3) ♀ # 2218

new subad ♂ (# 2221).<sup>later</sup>

X 89 (5) new ♂

Eutamias.

Rockslide (5) 1 GNGS (lifted all 5)

W. Peak (2) # 2197 from U. Spring

Huge Rocks Pyramid-like  
in trees at bridge  
behind St. Mary's  
House.at least 1/2 mi from  
birth site.Lab.

220g ♂ from Mile 3.9, # 2221

+ 0.25 cc RC @ 1.36 pm

+ 0.10 cc

+ 0.10 cc

@ 1.49

@ 1.55 pm

Recovered 2.24 pm

Got 0.6 ml BL via H.P. @ 3rd attempt

# 2218, ♀ 155g

+ 0.2 cc RC @ 2.25

+ 0.1 cc

+ 0.15 cc RC @ 2.34.

2220?

Didn't go under, recovered 2.51

Picked up a dead Tamiasciurus douglasii on Hwy 89

@ Sagehen Turnoff 330 - 130 - 21 - 55 = 290g

5 x 30mm Embs in l. horn of uterus, pickled it.



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Journal

Aug. 2 7am U. Spring (15) 1 GHGS & 1 Eutamias

# 2196

# 2194

ad ♀ # 2174 Hypothermic (Recovered after 2 hrs warming)

ad ♀ # 2177

# 2195

L. Spring (3) Nothing

8.02 Mile 4. ad ♀ # 2181

# 2190

# 2182

ad ♂ # 2180

# 2184

2 GHGS

8.20 Mile 3.9 (4) 1 GHGS.

Lab.

2220 (see Yesterday's Notes) Mile <sup>4.2</sup> 3.9.  
~~# 2220~~

♂ + 0.25 ml RC @ 3.44 pm

Had to use a little Metofane as well, went under 3.55 pm.

Took 0.3 ml BL via H.P., Recovering by 4.15 pm.

♂ # 2197, W. Peakas, 105g, + 0.15 cc RC @ 4.14 pm

under by 4.19. 0.3 cc BL via H.P.

♂ # 2223, X89, 255g, + 0.3 cc RC

but couldn't locate heart w. needle.

11.30 pm U. Spring (16) 3 Eutamias & 2 GHGS

♀ # 2196

# 2217

# 2194 & # 2187 (same trap)



Journal

g 2 (cont.)

U. Spring (cont.)

# 2195

ad ♂ # 2176

l. eye socket  
slightly infected.

Aug. 3

7am U. Spring (16) 2 GMS

ad ♂ # 2176

ad ♀ # 2174

# 2186 & 2187 (same trash)

# 2217

# 2194

ad ♀ # 2177

R. Spring (5) Nothing

Mile 4.2 (13) 1 GMS

ad ♀ # 2181

# 2184

# 2182

# 2190

# 2220

Lab.

♀ # 2218, Mile 3.9, 160g

+ 0.25 ml RC @ 12.24

@ 12.32 pm got 0.35 cc BL via H.P.

♂ # 2223, X 89, 255g

+ 0.3 cc RC @ 12.47

(Kept eating while being injected)

0.4 cc BL. via H.P.



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Journal

Aug. 31 Sagehen Creek Field Station, Nevada Co., CA.

Cathy and I came up from Berkeley last night to spend the Labor Weekend chasing woodrats, but also to bid farewell to Mike & Mary Yoder-Williams (& Holly) as they leave Sagehen (on Sept 7) for Mike's PhD plans at Seattle.

9.15 pm U. Spring (15) 1 GMGS & 1 Eutamias

♀ # 2187

ad ♀ # 2177

L. Spring (5) ad ♀ # 2174

Sept. 1 7.15 am U. Spring (15) 3 Eutamias (2 in 1 trap)

♀ # 2186

ad ♂ # 2126

& 2 new subadults

L. Spring (5) ♀ # 2174 (same trap as L. night)

7.45 Rockslide (5) 2 new subadults.

8.00 X89 (5) Nothing

8.20 Mile 4 (15) 1 GMGS

♀ # 2190

♀ # 2182

ad ♂ # 2180

lost some fur off tail  
on trap door

♀ # 2184

ad ♀ # 2181

Lab. U. ♀ # 2224, (sex?) 175g, + 0.2 + 0.15cc RC, no effect

U. Sh # 2225, ♂, 150g + 0.3cc RC @ 12.30

Took 0.35cc BL via H.P. @ 12.40.





Journal

Sept. 1 (cont.)

Lab. (cont.)

♀ # 2226, Rockslide, 195g, + 0.35cc RC @ 12.49.

small hole in r. ear near where ear tag would go. Put in #2226 behind this hole.

♀ # 2227, Rockslide, 210g + 0.35cc RC @ 1.07  
+ 0.15cc RC @ 1.17

Got 0.35cc BL via HP @ 1.25 pm

Sept. 2

8.30 am U. Spring (15) 2 Eutamias

4 GNGS

L. Spring (5) ad ♀ # 2174

Rockslide (5) Nothing, lifted traps

X89 (5) ♂ # 2223 " "

Mile 4 (15) 1 GNGS

# 2190

♀ # 2182

ad ♂ # 2180

♀ # 2184

Under Mgr's House (2) 1 lactating ♀ 270g # 2228 <sup>Didn't bleed</sup>

1 juv ♀ (hand caught) 70g # 2230 <sup>Didn't bleed</sup>

Released again under House, will bleed again in 2 wks if still here.

Lab.

# 2224, U. Spr, 175g + 0.3cc RC @ 12.40  
+ 0.15cc 12.50

Took 0.35cc BL via HP @ 12.55

Picked Eutamias

(hypothermia) died in trap at U. Spring

♂ (t = 6mm) 230 - 99 - 36 - 21 = 63g



Journal

2 (cont.) 8.40 pm U. Spring (16) 2 GMS  
3 Eutamias (1 dead in trap door  
snap-trap fashion  
♀ # 2186

Sept. 3 8.20 am U. Spring (16) 2 Eutamias  
♀ # 2187  
ad ♂ # 2176  
ad ♀ # 2177  
# 2225

L. Spring (5) Nothing  
Station Hgs Hze (6) ♀ # 2228  
2 new juvs  
1 new subad.

Lab.

Station Hgs Hze	♀	75 g	# 2229	didn't bleed
"	♀	70 g	2231	"
"	♂	170 g	2232	"

So #s 2228, 2229, 2230, 2231, 2232 to be bled later

Pickled Eutamias died U. Spr. trap last night  
♀ nullip 191 - 77 - 30 - 17 = 46 g.



Journal

Sept. 13

Sagehen Creek Field Station, Nevada Co., CA

Jim & Carol Patton, Betsy Mitchell & I took the current Mammalogy class (200163) of 30 students on their first fieldtrip to Sagehen & Chilcoot. We drove up in the morning in 5 Ford 8-seater vans (rented from Hertz, the campus garage could not get their act together).

At Sagehen I took  $\frac{1}{3}$  of the group south to Sagehen Creek at Hwy 89 while Jim & Betsy took the remainder north to Kilm Meadow. The students set 2 lines of 10 Museum Specials each, as well as Tomahawks for woodrats and flying squirrels. After dinner Jim took everybody into the conference room and gave a lecture & demo on traps and trapping methods. At 11pm we took everybody out to check their trap lines.

Woodrats 11pm

Mile 4.2 (15)

♀ 2184 by Jean Thompson

♀ 2190 " Kathleen Turner

♂ 2180 " Damon True

♀ 2181 " Kirk Loveland.

U. Spring (12)

♀ 2174

♂ 2176

♀ 2177

♀ 2187

By JLPs  
Group.



Journal

Sept. 14.

I got everybody up at 7am. Most people slept in the tent cabins overnight since the tarps had not yet been removed from the tent platforms. After breakfast we all headed off to check and lift trap lines.

8.41 am. Mile 4.2 (15)

♀ # 2184

♂ # 2180

U. Spring (12) # 2224

♂ # 2176

St Hggs Hse (10) # 2229

2230

2231

new juv (2ib?)

Also # 2232 subad over dining room.

10.38 am Lab.

# 2229 ♂ 120g + 0.2 cc RC @ 10.40

got 0.25 cc EL via HP @ 10.48

# 2230 ♀ 100g + 0.2 cc RC @ 10.55

+ 0.1 cc " 11.00

+ 0.1 cc " 11.07

+ 0.025 Ket " 11.15

+ 0.05 Ket " 11.27

Couldn't find heart. So after 3 attempts, let recover.





Journal

Sept. 14  
out.)

# 2231 ♂ 100g + 0.2cc RC @ 11.24

got 0.25cc BL. via H.P.

But died after HP (Thoracic Hemorrhage)

got 2cc BL from cavity, also Tissues.

# 2233 ♀ 105g.

In the afternoon we

drove to the Gt Basin Desert at Chilcoot.

Everybody set trap lines and one <sup>with Jim & Carol</sup> van returned

to Sagehen with 7 students. The rest

of us camped out. Betsy and I demonstrated

how to use the MVZ's new night vision

goggles. The class lit a huge campfire

and after dinner we all sat around drinking

beer and telling stories. I set some traps

for bushy tails down the creek from our

campsite in some huge boulders. Found a

large store of green leaves in a rock

crevice.

Sept. 15

After breakfast I tagged a huge ♂  
woodrat (over 500g) at the Big Rockpile.

Jim & Carol arrived around 7.30am. We broke

camp, lifted all trap lines and returned

to Sagehen where the class resumed work

on their study skins. Some of the class helped

Joe Thornton remove the tarps from the tent

platforms before we headed off for Berkeley.



Journal.

Sept. 28 Hastings Reservation, Carmel Valley, Monterey Co, CA.  
Drove to Hastings (150 mi) in the morning with Cathy. We called in to see Walter Koenig before starting to survey Linsdale and Tevis' old woodrat Study Site along the northern edge of the Long Field. We used maps from Linsdale & Tevis' book *The Dusky Footed Woodrat* (U.Ca Press, 1951) to locate the sites of many of their 150 rat houses. Many of the old wire and wood markers were still in place although, in many cases, they were no longer legible. Most of L. & T.'s houses have vanished and in places the suitable habitat has contracted.

Sept. 29 In the morning we continued our survey of the Long Field. In all we counted about 60 houses without searching too hard. This is probably a gross <sup>under</sup> estimate, but it will ~~quickly~~ <sup>shortly</sup> be revised when I start individually marking rat houses. I had a look around the old barn and found 57 of L. & T.'s old markers which can be used for starters. There are also a lot of L. & T.'s 'Young' traps on the upper floor of the barn. There are also, apparently, a few woodrats living in woodpiles in the barn itself. We returned to Berkeley in the early evening.



P.A. Kelly  
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## Journal

Oct. 11.

Hastings Reservation, Carmel Valley, Monterey Co., CA.  
Left MVZ at 5 pm with Cathy. Traffic on the Nimitz Freeway (17) was heavy and slow. Got to Hastings around 8 pm. After dinner went for a walk and showed Cathy just how effective the MVZ's new pair of night vision goggles are. Unfortunately we didn't see any deer or carnivores for actual viewing.

Oct. 12

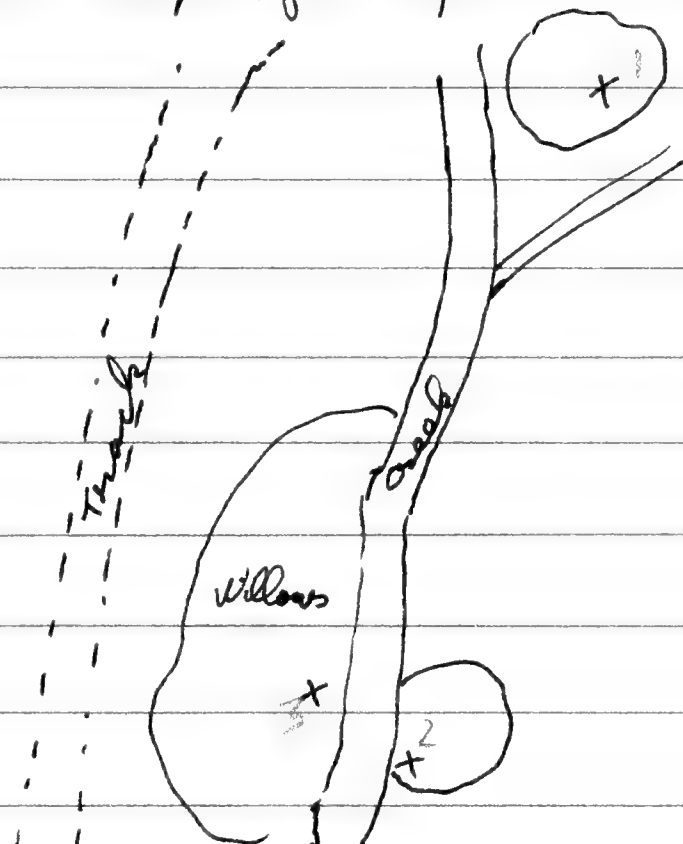
After breakfast we got 57 old wood & wire woodrat-house markers (a la Hinsdale & Lewis) from the Big Barn. With these <sup>& yellow flagging tape</sup> we proceeded to mark all the active-looking houses along the north-east side of the long field. Around 10 am we saw a Golden Eagle circling overhead and being mobbed by a Redtail. We used up our last marker <sup>(#57)</sup> near to h. & T.'s old Hse #74. After 6 pm we set 31 Tomahawk traps, baited with <sup>a</sup> peanut butter/oatmeal mixture, at the first 31 (east end) of those marked houses. Lots of birds around: Western Bluebirds & Bush Tits, some Phoebe's too. In the barn I earlier found a large woodrat trying to hide by burying its head, ostrich-like, in the corner of ~~the~~ a trap box. Many of the traps, incidentally, contained the mummified remains of mice. There were also about 3 dozen <sup>Black-tailed</sup> ~~Star~~ Deer in the vicinity.



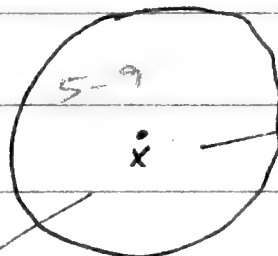
Journal

Oct. 13 Got up at 7am and after a cup of coffee went out to check all 31 traps starting at the east end of long field.

1st Group of 4 traps:



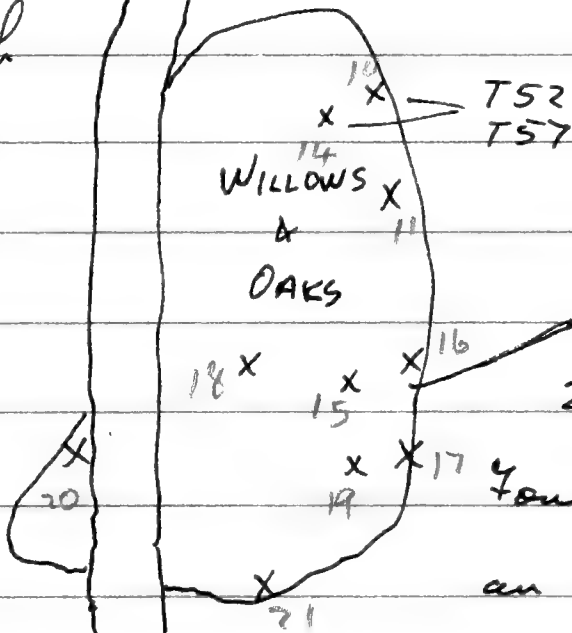
One live Oak



trap 6ft up in fork of trunk

♀ 240g # 2235 returned to live 25-30ft up on N. side of Oak

2nd Group of 10 traps



Temporary House #

H2e T60 ♀ 245g # 2236

2 Traps Missing from T52 & T57

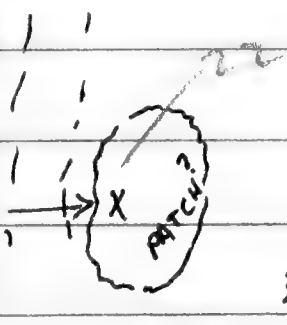
Found one near the creek, contained an ad ♂ minus both back legs, & front leg (l. one broken), Head & shoulders skinned. Remains 185g, Tot Lt ≈ 360, Tail 189. Gave him # 2245 Took all body Tissues &c blood. Did not find the other trap

# called

10/2/85

3rd Group of Traps

270g ♂ # 2237

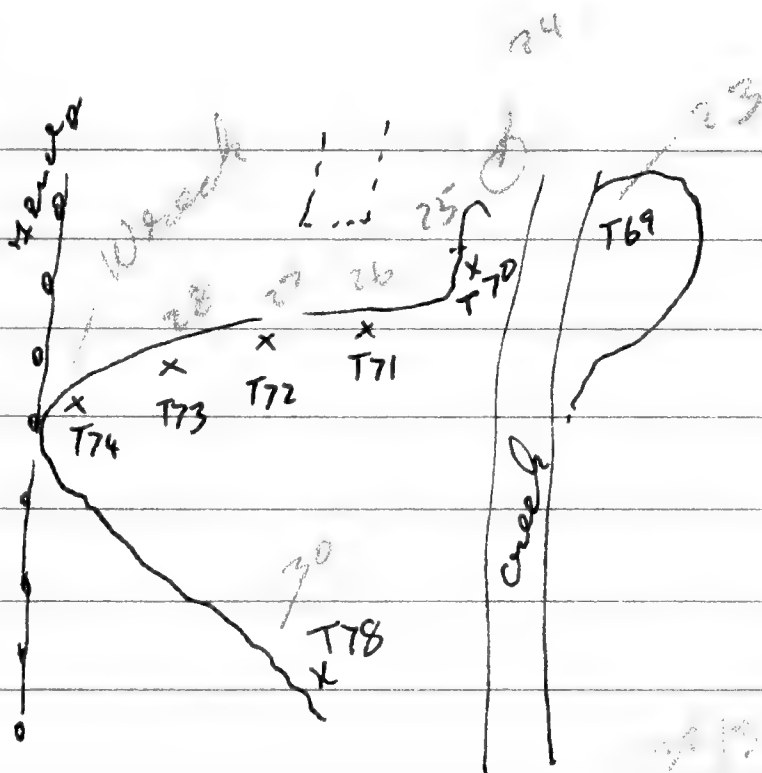






Journal

Oct. 13  
cont.)



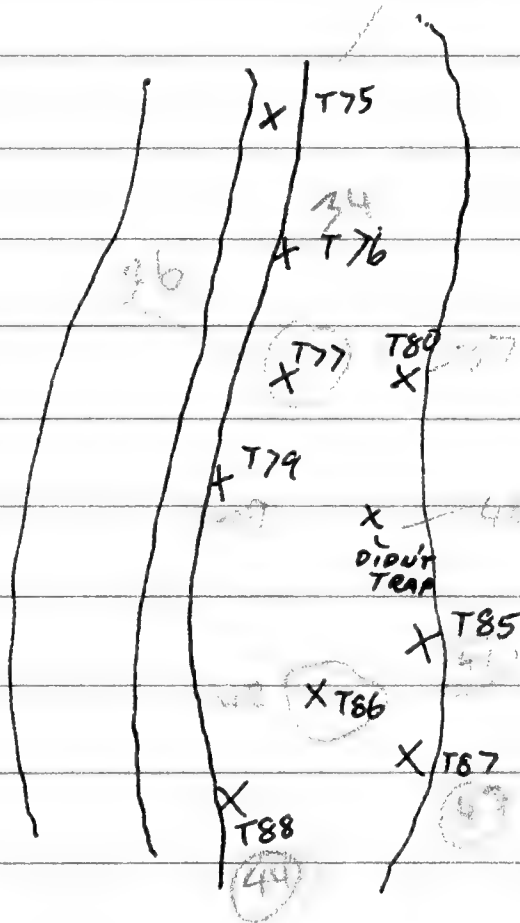
T 71 07 290, # 2238

T72 ♀ 240g # 2239

T73 ♀ 160g # 2241 (Brook Tag 2110)

T70 ♀ 225g # 2242

1 rattled tail once  
back in Hze T70.



# 2243

T 75 ♀ 215g returned to  
its lge 'double luse' in creek bed.

T 76 ♂ 225, # 2244

returned to hole in base of  
willow s. of T76

T 77 07 290g # 2248 (broke  
2245  
2246)

returned to H<sub>2</sub>e T79

T86 ♀ 250g # 2248 returned  
to H2c T86

T88 ♀ 240g # 2249

old ♀, thin, l. eye gone,  
clunk missing from l. ear,  
fur damaged, returned  
to small box in Willow over T86

In all tagged 12 animals (407, 89) but failed to recover 2 traps. Returned to Berkeley in the late afternoon.



Journal

Oct. 18 Hastings Reservation, Carmel Valley, Monterey Co., CA.

Zoo 163 field trip to Hastings (Part I, 16 students).  
Jim & Betsy left the MVZ @ 10.30 am with Carol Patton and 9 students, I took 7 students @ 12 noon after their class commitments. We stopped in Salinas for food and supplies. Got to the reservation at 3.30 pm. Jim took <sup>(ie marched)</sup> 8 students up Haystack Hill to set traps at the 35 Station Chaparral Calhoun line. Betsy took 4 to the 20 Station Oak Woodland line behind (south of) the School house, while I took 4 to the 20 Station line in Pierson Field. Jim also set up mist nets for bats over the Cow Pond on the Noyce Property. Many students also set Sherman and large & small Tomahawk live Traps. We only got one Peromyscus in the bat nets.

Oct. 19

Got up at 7.30 am. After breakfast every one headed off to check the Calhoun lines. We only had a Tree House and a Harvest House in Pierson Field. The morning was spent putting up study skins and autopsying the Calhoun line animals. In the afternoon I got a ride up to <sup>the Old</sup> Arnold Homestead with Suzanne Schettler (the Maintenance Mgr). What a view, and so peaceful too. Around 5 pm I set 15 Tomahawks for woodrats at some more of my marked houses in the long Field.

Jim, Betsy and Mike Seidl helped. We  
P.S. Found the 2 missing traps from last week. <sup>(cat #)</sup>  
and rat remains inside (127)



Journal

then watched the Mist nets for an hour and we drank a bottle of rum to keep warm. Only one *Myotis* flew into the nets. After dinner, Jim showed slides and talked about his work in Peru. We then checked our traps once more. No woodrats however.

Oct. 20. Betsy & I got up at 6am to check our traps. It was still dark outside but not so cold. There was nothing in the Bat nets, or in Betsy's Tomahawks which were set to catch bunnies. However the Rat traps contained a few surprises: 4 of the 15 contained a plastic blood stained hand, a rubber cockroach, a plastic mechanical penis, a packet of candy condoms and overly-perfumed panties, an erotic photo with message. I don't know what I did to deserve this. Luckily for the culprits I also got some rats however: 6.40 am

Hze T109(49) ♂ #2247 (from T77 last week).

Hze T107(47) ♀ 225g #2250 large bot fly larvae below throat on l. shoulder

Hze T111(50) ♂ 250g #2251 returned to T114(56)

We also caught a beautiful grey fox on top of Haystack Hill. He took about a 1/2 doz rodent carcasses from Betsy as well as cleaning out the trap bait as well. Headed back to Berkeley at 2.20 pm.



Journal

Oct. 25 Hastings Reservation, Carmel Valley, Monterey Co., CA.

Part 2 of Zoo 163 Fieldtrip to Hastings. Jim & Betsy left at 10am with their vanloads. I took the later crew of four students at 12.30. We got to Hastings at 3.45pm after a 15 min stop for lunch in Salinas. On arrival Jim decided to run the Calhoun lines again this weekend. I took a crew of 4 to do the Pearson Field line, while Betsy did the School Hill line and Jim took the largest group up Haystack Hill. We also set 20 Tomahawk traps for ground squirrels mainly on the Noyce Property. We have decided to mark the Beechys with numbered ear tags and colored hair dyes for behavioral observation. Jim also set mist nets at the Cow Pond and caught 1 Parus. We all were amazed with the clarity of vision through the night vision goggles, thanks to a practically full moon.

Oct. 26

Jim "kicked us" out of our bags at 7am. After breakfast the Calhoun lines were checked: as usual the Chaparral line was the best, and the Meadow line the worst. We tagged and marked one ground squirrel, also caught 5 more throughout the day. In the evening we lifted all 35 squirrel traps and ~~also~~ set them with 25 more for woodrats along (Bob Jones gave me 22 more non collapsible Tomahawks).





Journal

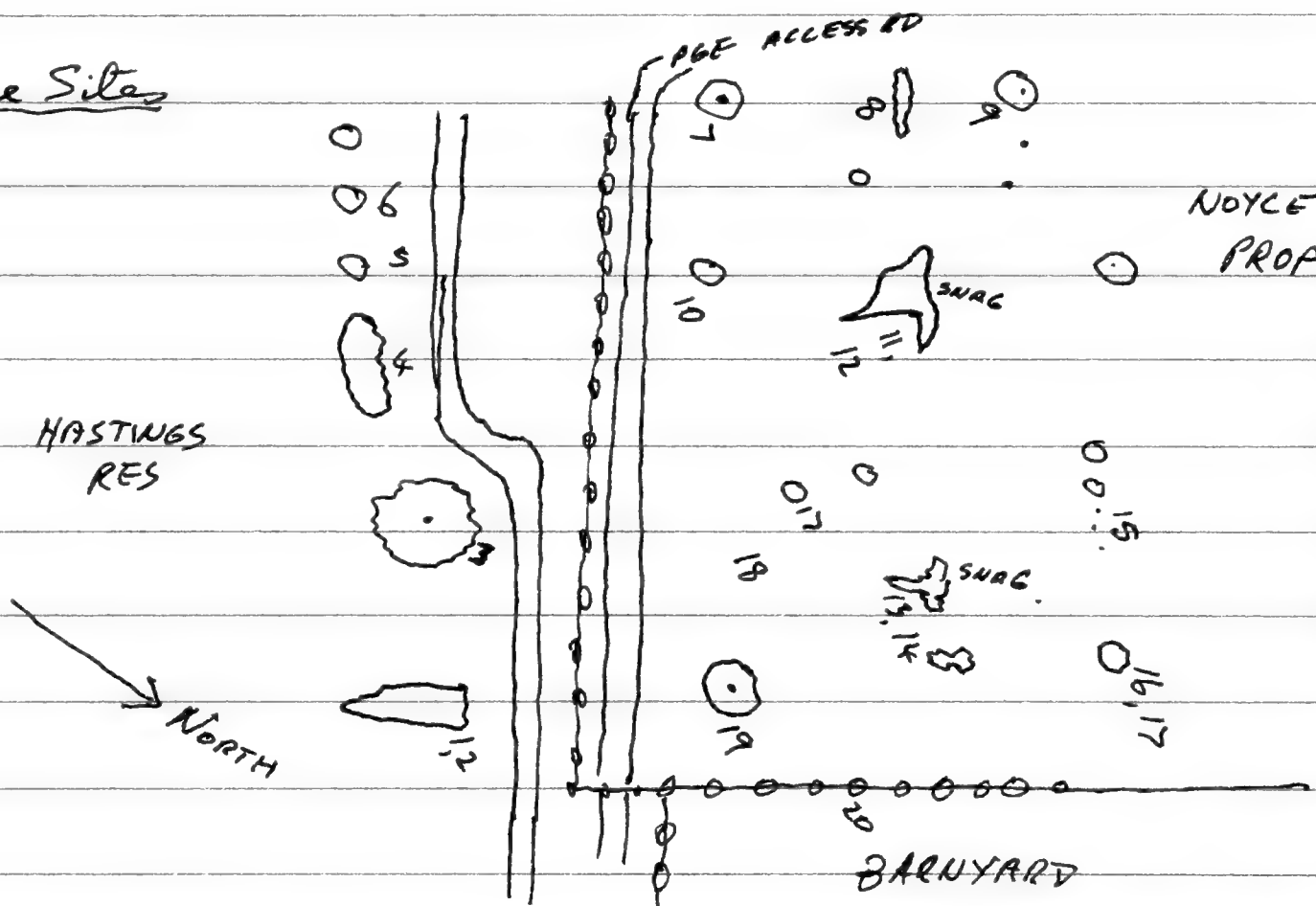
by the Long Field.

Oct. 26 (cont.)

Spermophilus beecheyi marked at Hastings

<u>Ear #</u>	<u>Color - loc</u>	<u>Sex</u>	<u>Wt.</u>	<u>Capture Site</u>
3000	Purple n. rear	♂ <sup>semi</sup> scrub.	740g	7
<sup>tag</sup> Bellout	Orange "	♀	610g	9
3002	Orange l. shoulder	♀	560g	1
3003	Purple "	♀	530g	8
3098 <del>3009</del>	Orange l. rear	♀	530g	11
3099	Purple "	♂ <sup>scrub.</sup>	600g	3

Capture Sites



10.59 pm Checked all 60 traps

#2253 released

♀ untagged rats @ T61, T63, T67, T68, T52, T148, H66 & others

also # 2236 @ T60 (16) # 2250 @ T107 (47)

2237 @ "Patel" (22) # 2247 @ T110 (50)

2243 @ T75 (32)

2244 @ T76 (34) (#2253 ♂ 235g)

2248 @ T85 (41)

2249 @ T86 (42)



Journal

Oct 27

7am Checked traps.

2 untagged rats down field 4

#2250 @ T107, & #2253 @ T61  
(47) (19)

Tagged and Released all the new rats at site of capture

at H20.	Sex	Wt.	Ear Tag #
T52 (10) ♀ (lac?) <sup>Post lac?</sup>		235g	2254
T63 (20) ♂		295g	2255
T67 (5-9) ♀ nullip		170g	2256
T68 (1) ♂		250g	2257
T70 (25) ♀ nullip		170g	2258
T75 (32) ♀		180g	2259
T148 (72) ♂		310g	2261
Red Flag out. (76) ♂		180g	2262
" " " h. (81) ♀		200g <del>240g</del>	2263 <del>2264</del>
Yellow Flag 1 L. (74) ♀		240g	2264
T66 (79) ♂		295g	2265
Yellow Flag 2 R. (83) ♀		190g	2266

27 Woodrats tagged to date at Hastings. Also  
2 casualties due to trap interference so far.  
I intend to mark all houses properly over the  
next few weeks.



P. A. Kelly

1986

Journal

California  
Nevada



P.A. Kelly  
1986

## Journal

April 1, 1986

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co., CA.

Left MVZ @ 1.30pm, arrived Hastings 4.30pm after stopping off in Salinas for supplies. From 5-6pm set 2 traps (baited w. COB) each at Hnos 1, 3, 25, 47, 49, 51; 4 @ H 50, 453/56; 6 @ 5-9; and 1 ea @ 11, 13, 14, 15, 16, 17, 19, 20, 22, 23.

Saw a med. sized Bobcat in good condition bound across the Highway (G16) about 2 mi north of Martin Rd.

From 8-11pm caught 11 rats (see Field Notes). Also had a 13g juvenile in trap with ♀ 2267-1045 at H.1. Appeared dead (very cold, didn't detect a heart beat), however it recovered in the warmth of my breast pocket. Fed with a little milk and returned in a tissue nest to basal entrance of H.1 @ 10.49pm.

April 2, 1986

Was still there but dead the following morning at 6 AM. Took Liver, Ht & Kidney, for tissues and fresh as a skeletal spec. (cat # 131).

10.15 AM.

Sedated ♂ 2253-1062 (H.19) with Metofane (Methoxyflurane) and attached a radio-collar (AVM (Livermore) SM1 with Hg-575 battery + loop antenna around neck). I also used a (trimmed) 5½" cable tie (potted beneath transmitter and battery) for secure attachment. Once the rat recovered, placed in 14"x12"x6" cage with cotton, COB, H<sub>2</sub>O & some Valley Oak leaves. Started eating, but continued to try to remove the collar.





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Drove to <sup>H.C.</sup> Santa Cruz in the afternoon and borrowed a Radiotelemetry Receiver, 2 Antennas, and 7 more Transmitters from Kay Holkamp (former student of Steve Glickman).

Returned to 2253-1062 to H.19 @ 5pm. Signal decreased once inside H.19 and also dropped off rapidly with distance from H.19. Signal only discernible 20-25 ft from H.19.

Trapped Hrs 1, 3, 11, 15, 16, 20, 5-9, 26, 27, 28, 50, 51, 56, 62, 64, 65, 68, 69, 71, 74, 75, 76, 81, 73, 79, 77 until 10pm (See Field Notes), but only left 18 traps (with Dacron or Cotton Bedding) at Hrs 50, 51, 56, 62, 68, 74, 81, 77, 79 open all night long because of a sharp drop in temp..

♀ 2275 (H.16) has had a litter (4 lost 3/g) since March 28.

10pm - signal still coming from H.19.

Apr. 3 8.20 AM " " " " " "  
4 Tomahawks w. Dacron & COB at H. 50. ♀ 2272 and daughter (3 Notch - 3 Tags pulled out) in sep. traps in cosy Dacron nests (despite heavy frost, did fine). No sign of 3 Notch's other sib (unmarked - see <sup>F.</sup>Notes March 25).

Raccoon track(?) near H.80 along creek.  
2" wide by 3" long, 4" x 1" 'toes'.

Tested signal range of transmitter # 21415 with



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Receiver TRX-24A (Wildlife Materials Inc, courtesy of Kay Holekamp) in the open at the Red House at 11.30 am. Effective signal range was only about 50 m.

1.30 pm ♂ 2253 not in H19, i.e. no signal there. Did however get an intermittent signal just W of 19 and then from 20. Then came back at 2.40 pm and found ♂ 2253 dead and partly eaten (see field notes & Cat # 132) on soil mound just E. of H. 20.

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co, CA

April 13

left Berkeley 1 pm, arrived Hastings c. 4.30 pm. Gene Fowler (Wildlife Dept.) travelled down separately in his van. He came to help me trap woodrats but also to advise Jim Griffin on control of the serious pig problem at Hastings.

5 pm released ♂ 2295 w. transmitter at H. 15. Also trapped active luses 49-81.

April 14

In the morning hiked around the Chahal all behind the Red Hze in search of Pig Sign. We also searched School Hill in the late Afternoon. Coming down of School Hill (NE Side) at 7 pm heard a lot of pigs rooting and squealing near the road behind Red Hze. When we found a good



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vantage point we sat down and watched across the road 50-60 yds away. A large sow appeared in the open facing to our right. Gene took aim with his Remington 308 while I waited for another sow (at least 2 present) or one of the many piglets to come into the clearing. When no other pigs appeared after 10-15 secs, I urged Gene to fire. He did. One shot and the sow rolled down the off. hillside to the Rd. while the other pigs scattered into cover. By the time we reached the pig she was already dead. The bullet entered behind the r. shoulder, went through the auricles, touched some thoracic vertebrae, and exited through the l. shoulder, and into the hillside. We cleaned and skinned the pig for freezing. The uterus contained 6x4 inch embryos and 2 resorptions. It was a job well done but many more will have to be removed to cut down on the degree of pig damage.

Left the Rat Traps open at Hrs 82-112 from 3pm to 9230 am, but closed them on a/c of rain. Returned to Berkeley in the morning.

Apr. 15



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18 (Fri) Smoke Creek, 3900ft, 9 mi E. California line,  
Washoe Co., Nevada.

Left Berkeley @ 6.30am to retrace the steps of an MVZ expedition (E.R. Hall, W.C. Russell, C Engler, Smiley, ) to Nevada (Hall's Mammals of Nevada Trips). Ward Russell remarks in his notes for July 8, 1936 that the Smoke Creek Site had an unusually high density of bushy-tailed woodrats. Decided to go and investigate the area with Cathy.

We travelled NE on I80 to Auburn & Reno, then N on 445 to Pyramid Lake, continued N on 45 mi of Dirt Road (over Sand Pass, past Round Hole Ranch) until we came to the trestle bridge over Smoke Creek (flowing, not very deep 6"-15" but fast current). Lge grove of Cottonwoods NW of Bridge. The old stone house was demolished c. 2 yrs ago (acc. to Lamb Family (Reno), regular visitors w. ATVs to this area). Could not find any sign of recent woodrat activity - No recent feces, no whitewash, no food stores. Ditto for Willow patch on both sides of the creek. Decided to set 10 Tomahawks (<sup>+ Cotton &</sup> baited w. COB) around the Old Hse and at the bases of 9 lge Cottonwoods.

We then drove c.  $\frac{1}{2}$  mi E. through the Sagebrush to another abandoned Ranch (the Cornell Place).





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April 18. The Old Hse was surrounded by large  
cont.) Willows, Poplars, and some other pinkish  
ornamental (?) shrub. Lots of woodrat signs  
but none of it recent. We set 10 more  
traps around this ranch. Went hunting  
for jackrabbits in the evening, but could  
not find any. There are lots of birds  
around however - Canada Goose, Shoveller,  
Pintail, Green-Winged Teal, Cinnamon Teal,  
Eared (?) Grebe, Kestrel, Robin, Yellow-Rumped Warbler,  
Am. Goldfinch, W. Screech Owl.

We camped overnight at the Cornell Place.

April 19 Didn't catch woodrats in any of the 20 traps  
lifted them all. Headed back towards California  
around 11am. At first we tried to follow the  
Smoke Creek Road but it was completely  
washed away & impassable  $5\frac{1}{2}$  miles W (up  
canyon) of the turnoff. Turned back and  
Headed for Flanigan via Sand Pass. Just  
before reaching Round Hole we saw 3  
Pronghorn Antelope run across the road  
and head W up into the Hills, where they  
proceeded to watch us.

At Flanigan we headed NW towards Lassen  
Co. and Susanville. We turned off on A3 however  
to link up with 395 S towards Reno, but took  
a R. onto Hwy 70 to Chilcoot. Took a R on Hwy 284



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April 19 (cont.) in Chilcoat. After about 2 mi turned E<sup>SE</sup> on trail into the Bush and camped at Patton's 200163 Study Site:

1.6 mi. NE Chilcoat, Plumas Co. CA 5200ft

We camped under some cone-shedding Jeffrey Pines at the head of the canyon (lge Grove of Ashens). In the evening we set 10 pairs of Tomahawks (baited w. COB) in the very large boulders at the neck of the canyon. Stream is flowing vigorously. Some woodrat sign about, found a porcupine skull at one woodrat den. I tagged a very large ♂ rat here last Sept. 15. (# 223-?).

April 20 I got up at 0530 to check traps. Got 4 animals: a lge ♂ and 3 subadults in separate areas of the rockpile.

Animal #	Sex	Wt.
<del>1102-1101</del> P. 201 P. 201. 1102-1101	♀	394 g. $\frac{1}{4}$ " hole in L. ear.
		recently lactating, perf.
1103-1105	♀	142 g.
1106-1107	♀ (?)	140 g.
1108-1109	♂ (?)	154 g.

Released all 4 at site of capture by 10 am.

11:30 am left Chilcoat and headed for Sagehen Creek Field Station via Vinton, Loyalton and



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Sierraville (Hwy 70489). Stopped en route and checked my Site 4.2, did not find any fresh urine or droppings during a 15 min. search. The bushes under the cliff face are just starting to bud.

Sagehen Creek is flowing strongly but at least the field station was completely accessible.

U. Spring Rockslide is virtually free of snow. Lots of fresh droppings, some fresh urine. Probably 2-3 adult ~~rock~~ rats on the rockpile. Saw 1 golden-mantled ground squirrel high on the rocks. The L. Spring is covered in 4-6 ft or more of snow.

Met Sandie Martin (wife of Joe Thornton the current mgr.). She let me borrow Ellen Woodard's powerful headlamp for a few days.



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## Journal

June 28

Sagehen Creek Field Station, Nevada Co., California

Left MVZ at 1 pm arrived Sagehen at 4 pm.  
Started setting traps at 5 pm. Set 30 in all,  
baited with <sup>6 1/2 oz</sup> cans  $\frac{1}{4}$  filled with COB. Also put  
a wad of dacron or cotton in all traps. Had  
dinner with Ellen Woodard's beaver crew. There  
are a lot of people at the Station right now:  
an Entomology Class of 6 from UC Davis with  
TA + Prof. <sup>Phil</sup> Ward. Jay Rosenheim also is here with  
2 assistants working on parasitic wasps.  
Also 4-6 others visiting looking for part-  
icular plants.

Started checking traps around 9.30 pm (2030 PST).

<u>Time (PST)</u>	<u>Location</u>	<u>Rat #</u>
2042	<u>U. Spring</u>	♂
2055	<u>L. Spring</u>	♀ 2187 + tag # 1218 in l. ear. (310 g Mid. Toe & hind foot gone. (lac., Milk + ve, Perf., Symp. Noted) Smear @ 2105 PST: Leucocytes + few Cornif. Cells Dusted w. Green Pig.
2145	<u>X89</u>	Untagged Subad. ♀ → lab
2204	<u>Rockslide</u>	" " ♂ "
2231	<u>U. Spring</u>	♂ 2179 → lab.
2244	"	♀ 2186 290 g, lact, + Red Pig & released.





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June 29

Got up early to check and close all traps:

<u>Time (PST)</u>	<u>Location</u>	<u>Rat #</u>	
0515	U. Spring	subad. ♀	→ lab.
0530	P. "	♀ 2187	
0607	Rockslide	♂ 2176	Old One Eye. → lab.
0610	"	♀ 2227	lact., Nore Grayed so released to retrap

0822

lab

♂ 2176 (Rockslide) 335g release & dust  
(green) this p.m.  
♂ 2179 (U. Sp.) 396g + tag # 1219 in l. ear.  
Dust orange & release in pm

♀ <sup>new</sup> 1220

(X89)

177g

+ 0.2 ml Rat Cocktail @ 0846  
+ 0.1 ml R.C. @ 0900.  
slightly perf. Smear: leucocytes  
+ few Cornif. Cells and Pebric  
Took c. 0.5 ml Blood via Heart Puncture

♂ <sup>new</sup> 1221

(Rockslide)

196g

(+ 0.3 ml R.C. @ 0933)

Took 0.5 ml Bl. via H.P.

4 ears → Entomology Class.

♀ <sup>new</sup> 1222

(U. Spring)

171g

(+ 0.3 ml R.C. @ 0958)

Took 0.55 ml. Bl. via H.P.

Not yet Perf. but getting there.

4 ears → Entomology Class.

Spun down blood & froze plasma and  
hemolysate.



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June 29 (cont.) In the afternoon I searched for other leucis-  
tail localities to the NE of the Sagehen Basin.  
Drove N-NW on Cottonwood Rd to its junction  
with Cottonwood Creek (Sierraville 7½' USGS quad).  
Plenty of deciduous fodder (willows, some  
aspens & cottonwoods) but little in the way  
of good rock cover. Did not see any wood  
rat whitewash. I also drove W along the  
Henness Pass Rd past Kyburg Flat to  
Groundhog Rock (Sardine Peak 7½' USGS quad.).  
More rock and willows and aspen along  
Davies Creek, but did not see any white  
wash. None at Groundhog Rock either.

Started setting traps c. 6.30 PM (PDT):  
Set 10 at U. Spring, 6 at L. Spring, 6 at Rockslide  
and 6 at X89. Released ♂ 2176 & ♂ 1221 @ Rockslide and  
♀ 1220 at X89. I shook a long-eared *Myotis*  
*Myotis evotis* from under a piece of loose rock  
at X89, he (♂ I think, big penis?) flew to  
a Manzanita bush 30-40' away. Caught him  
in my bandana for identification back at  
the field station. Released him again around  
10 PM when I started checking traps.

<u>Time (PST)</u>	<u>Location</u>	<u>Rat #</u>
c. 2100	U. Spring	Released ♀ 1222, and ♂ 2179 (dusted orange)
	"	♀ 2186 dusted again w. Red. Pig.
	"	♀ 2177 lact., dusted w. Green "
c. 2215	"	Orange Pig. (♂ 2179) all over W. side of 'inc. dragging' U. Sh.



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June 29 (cont.)

2232 PST Caught ♀ 2187 at h. Spring.

2235 Closed all 6 traps at " left only 6 open at U. Spring want to track tomorrow evening. Didn't check Rockslide or X89

June 30

### Trap Check

0500 PST Rockslide ♂ 1221 released

" ♀ 2227 dusted w. Red or Orange Pig.

0538 " X89 newad ♂ (1223) at W end of X89

0603 " U. Spring ♀ 2186 E. End of U. Spring.  
lots of Red Pig. → SW across  
(out under) rockpile.

Lab 0729 PST ♂ 1223, 368 g +0.5 ml R.C. @ 0734 PST

Collected 12-15 fleas for Entomol. Class

Grazed Nose Badly on Trap.

Took c. 0.8 ml Blood via H.P.

Spun down & froze Plasma & Hemolysate.

Heard from Joe Thornton that he trapped a tagged rat twice at the Upper Washroom:

May 8, 1986 ♀ 2174 Upper Bathroom

" 20, " " " "

On both occasions she returned to pile of rocks beside the road when released outside the Bathroom.

In the evening (6-8pm) released ♂ 1223 at X89

Also with the help of Mary Clare Thomas and Liz Sweeney (field assistants at Station).

helped set 12 traps at Mile 4.2, 6 traps at Mile 3.9, 6 at North Peak (or is it East Peak) and 6 under Mgr's H2e.



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June 30 (cont) 2119 PST Searched the U. Spring for fluorescent trails with the Black lamp. Fresh urine marks are also fluorescing a greenish color. Found orange pig from ♂ 2179 on the W. end of the rockpile. Found more of 2179's pig toward the middle of the rockpile - smeared on the angular tip of a rock. Looks like deliberate marking (w. Ventral gland) as in previous case. Found a succession of 2179's marks and all were along the most dorsal edge provided by the rock in each case. Found 2179's den I think big 'hole' in rocks behind one of the big central Ashens on the upper E. side of the rockpile. Rocks in front of the den are completely smeared with orange pig. Also lots of fresh urine. Found more of his pig throughout the W. side of the U. Spring, again mainly on dorsal-most edges.

~~2148~~ Pig from ♀ 2186 (Red) and ♀ 2177 (Green) was confined to areas of capture and release.

2149 PST at the L. Spring found green pig from ♀ 2187 along the N. side of L. Spring especially at capture and release points. I also however found a little orange pig from ♂ 2179 in 3-4 places adjacent to ♀ 2187 trail.





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July 1. Mary Claire Thomas & Liz Sweeney came out to help me check and lift all traps in the morning. We only caught one rat however:

<sup>new.</sup>  
subad. ♀ # 1224 195g (Will take blood sample next time)

Packed away all my gear and headed back to Berkeley at 10 am.



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July 12. Sagehen Creek Field Station, Nevada Co., California  
left Berkeley with Sue Bonfield (M.Sc., field assistant Woodpecker Project at Hastings) around 10am, arrived Sagehen c. 1pm. Showed Sue around the Station and stowed our gear.

At 4pm we assembled 30 Tomahawks and set 12 at U. Spring, 6 at L. Spring, 6 at the Rockslide, and 6 at X89. All were baited w. COB. and had a wad of Dacron/Cotton added. Didn't do an evening trapcheck.

Instead took Sue to see the Trestle and Wyethia beaver 'colonies'. Unfortunately, we did not see any beavers. Hit the sack at 10pm

July 13 Got up at 5am and headed out to check all traps :-

U. Spring · ♀ 1222 181g perf. bloody stain on vulva.  
(12 traps) ♀ 2186 275g lact., Milk + ve, Perf., Symp. Notched,  
6 pairs  
(♀ 1222 & ♀ 2186 in adjacent traps on Upper W. Side)

♂ 1219 (L. ear) 393g

L. Spring ♀ 1218 (L. ear) 281g Perf., Symp. very Notched, Lact., Milk + ve

(6 traps) X 89 ♀ 2230 281g lact., Milk + ve, Perf., Symp. Notched

(6 traps) ♂ 1223 379g

♀ 1220 185g Imperf.

Rockslide ♀ 2227 231g lact., Symp. Notched

(6 traps) new ♂ 1251 136g TAKE BLOOD NEXT TIME

In the afternoon checked out Carpenter Ridge with Sue. Did not see any Woodrat sign in the Rockfiles at the top, but did see Pika<sup>(brookings)</sup> sign and a pair of Marmots.



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July 13(cont.) Around 5 pm we set 12 tomahawks singly at Mile 4.2. We also opened the 12 traps on the Upper Spring and the 6 on the Lower Spring for an hour or two at about 8.30 pm. But closed them early.

2126 PST U. Spring ♀ 2186 lower W. Side - den in rocks.

July 14

0556 PST Mile 4.2

♀ 1224 219 g, perf. nullip.

new ♂ 1252 363 g

lifted all traps and after breakfast headed in to Tenuckee for supplies. By noon was heading East on Highways 269, 28, 50 & 395 to Nevada. Headed E. off Hwy 395 on Topaz Lane, Eastside Ln., and Risue Rd. to search for Neotoma cinerea habitat (like Smoke Cr., Washoe Co.) along Desert Cr. It looked far too dry (Pinyon/Juniper) and I couldn't see bushy-tails getting there, so we turned back and headed S. on 395 to Bodie Rd. (Hwy 270). About 3 miles E. of 395 we found some rockslide with Aspen cover along Clearwater Cr. on S. side of Hwy 270.

Clearwater Cr., 3 mi. E. of Hwy 395, Mono Co., California  
Sue and I set 20 Tomahawks baited with peanut butter & oatmeal along by the creek beneath aspens. Didn't see any fresh bushy-tail sign but did see some old whitewash in places. We camped in a turnabout on the N. side of Hwy 270.



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July 15.

Around 7am lifted all the 30 traps along Clearwater Cr. Caught <sup>(Cat #141)</sup> 1 Neotoma cinerea.  
Decided to head south in search of other collecting sites. In the morning we visited the Mono Lake Conservation Center in Lee Vining and took a guided tour of the South Tufa area. An impressive lake - ecosystem - and a very professional tour by our intern from Humboldt State. I hope common sense and conservation prevails in this debacle.

In the afternoon we checked out some Rockslides on the N. shore of Lake Tundy but could only find Pika sign. Also one of the shopowners at Tundy said woodrats have not been seen in the area.

We then in desperation decided to head farther S. and survey the June lakes loop. We found a lot of fresh bushy-tail sign (urine + feces but no whitewash) in an area of large, unstable, granite boulders and aspen along the W. side of Hwy 158 just past the S. end of Grant lake.

Hwy 158, S. Grant lake, Mono Co., California. <sup>(7200 ft.)</sup>

We set 15 pairs of <sup>(30 traps)</sup> Tomahawks throughout the rockpile in the early evening. We made camp at the Grant Marina - expensive \$9 for a camp spot. At least shower & washroom facilities were available however.





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July 16

Got up at 5 am and made breakfast. Cleared camp and headed S. on Hwy 158 to check our traps. We had 10 musky-tails (Cat #s 142-151) in the 30 traps. More than I expected! We spent the morning pulled in to a grove of aspens across the Hwy (E. side) killing, measuring and taking tissues. We decided to head S. to Bishop to Tom Kucera's place (Wildlife; doing Ph.D. on Mule Deer Movements) to ~~pick~~<sup>put</sup> up the study skins. Tom wasn't around so we headed W. and checked out rockhills around Sabrina Lake (c. 9000 ft) for woodrat sign. Didn't find any. We camped by a bridge 4-5 miles up Pine Creek Road overlooking <sup>the valley</sup> Bishop. We skinned all eleven woodrats in prep. for study skins in the morning.

July 17

Got up 6 am. We ~~had~~ all the skins put up by 11.30. We then drove W. on Pine Creek Rd until it culminated at a Pack Station and Tungsten Mine at 7600 ft. Found some old whitewash on rocks above the Pack Station, but no fresh sign. The station operator has not seen any woodrat activity in the area either. Finally got Tom at home in Bishop. After dinner I drove N with Tom, and Sue to some volcanic escarpments (immediately E. of Fish Slough,



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July 17 (cont.) Bishop ~~75~~<sup>15</sup> quad 4144 N, 376 E.) where Tom had seen a lot of whitewash. Much of the 'whitewash' seems to be a calcareous (?) component of the volcanic rock there. But there is also a lot of bird feces, especially Barn Owl, on the rocks. We did however set 11 tomahawks baited with COB at woodrat middens. These are probably Neotoma lepida though.

July 18

Collected the 11 traps around 8 am. We caught only one  $\Rightarrow$  Neotoma lepida. The tip of his tail had white fur. (Albinism of the tail tip as in Ahodemus?) We released him.

Later on in the afternoon we went 'touring' with Tom in his DCM truck. We drove to the end of the Rock Creek Rd but found no woodrat sign on the few rockpiles we checked out. We continued N. to the Mammoth area to see the mirasats and the proposed expansion of skyjacking facilities.

July 19

In the afternoon we drove to Fish Slough (N. of Bishop) to see the Desert Pupfish reserve. We bumped into Phil Pister (the inspiration behind pupfish conservation) in the local Safeways. [I was very impressed with an MVZ lunch



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he gave on the subject about a year ago.]  
The pupfish were really spectacular with the blue-colored  $\rightarrow\rightarrow\rightarrow$  exhibiting obvious territoriality. We swam and simultaneously fished for crawfish - we caught 19. - for a few hours.

Around 6pm I drove S. on 395 with Sue to check out Big Pine Creek. We drove all the way to the top but did not see any sign of woodrat activity. One of the staff in the lodge at the top said he had no knowledge of woodrats in the area or buildings. We didn't set any traps.

July 20.

We drove N on 395 in the late afternoon (after spending  $\frac{1}{2}$  the day touring the Piñon and Bristlecone Pine Forests of the White Mtns with Tom). Decided to trap two locations E. and S.E. of Tioga pass. We have already a few specimens in the MVZ from these 2 locations. We set 20 traps at each site:

Site 1. Warren Fork of Leeving Creek <sup>(c. 9200 ft)</sup>, on S. side of Hwy 120 in Boulders + small Ashers.

Site 2. 1 mi. S Williams Butte (S. of 120, W of 395)

Set traps under large Boulders + Piñon  
Camped S. of Williams Butte. Didn't catch any woodrats. Probably should have worked higher up on the Butte. Crossed Yosemite Park and returned to the Hastings Reservation.

Mon, July 21



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## Journal

pt. 9

Left Berkeley c. 10.30 am and drove to Sierra City via I.80 to Colfax and then Hways 174 and 49. Looked for Dusky-Tail Activity along the way. Found an extensive rockslide:

Salmon  
Yuba River, SE of Junction with ~~Strawberry~~ Creek,  
Sierra Co., California (5040 ft)

Extensive boulder field on steep slope on E. side of Yuba River. Lot of old whitewash with occasional spots fresh urine, no faeces. No fish sign either. Rockfield surrounded by dense brush: - oak, shrubs w. prickly "cankers", manzanita. Also some lge Red Fir. Along creek more Fir trees, Jeffrey Pines, some small Junipers, Willows, more shrubs + brush, also a shrub with reddish/orange bark but Cottonwood-like leaves. Also a number of large Cottonwoods along creek. Set 10 traps under lge rocks <sup>c. 5 ft</sup> (w. whitewash) just E. of river.

Then headed off in search of other locations near Sardinia Lake, Packer Lake and Gold Lake Rd. Didn't find any fresh sign. It was too dark when I found the other huge rockslide a ~~few~~<sup>2.2</sup> mi. E. of S.F. State Field Station. (Visited it last yr.) to set any more traps. Camped at Strawberry Cr. Campground. after going into Sierra City for a beer.





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Sept 10

Got up 6.30 am. After breakfast checked and lifted all 10 traps SE of ~~St Salmon~~<sup>St Salmon</sup> Co. Bridge. Got 1 young ♂ Bushy Tail. Climbed to top of the rockslide. Same as the bottom. Fair amount of old white wash, speckled in places with small amounts of uric. One uric deposit was still wet.

Between 9.30 & 10.15, I checked out the big Rockfield 2.2 mi E. of S.F. State Field Station (just W. of 6000 ft elevation marker on Hwy). Found no fresh Neotoma sign, only pile sign but none were calling like last year.

Continued on E on Hwy 49 over Yuba Pass and into Sierra Valley. Then S on Hwy 89 through Sierraville to Sagehen. Did a little exploring along the W side of Cotton Wood Cr. en route. Processed the rat from Yuba River (Cat #152), took blood, saliva, saliv. gland, muscle, heart, kidney, liver & 2 ml. of urine. Between 5-6.30, set 10 tomahawks at U. Spring, 5 at L. Spring and 10 at Rockslide. Baited with peanut butter + oatmeal and set singly.

No running water at Station for the next few days: pain in the ass. Drove in to Truckee in evening for some TV dinners and drinks. Checked all traps between 9.30 & 11.00 pm. Moon approaching first  $\frac{1}{4}$ , setting around 11 pm.



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Sagehen Creek Field Station, Nevada Co., California.

Sept. 10 Rockslide 9.30 - 10 pm  
out.) 2 Rats: - New Juv. ♀ (1271) (+ 2 Co. Mantled G.S.)  
♀ 2227

U. Spring c. 10 pm ♀ 2186

L. Spring c. 10.15 pm ♂ 2179 - 1219 (+ 1 Spotted Shunk)  
New Juv. ♀ (1270)

Sept. 11 Got up 6 am, ~~and~~ checked and closed all traps.  
Caught another spotted shunk at L. Spring.  
Seems smaller than last night's one. Really  
stinks. I don't think it actually sprayed  
me but I could not shake off the smell.

U. Spring 6.10 am

♀ 2187 - 1218

New Juv. ♂ (1269)

L. Spring 6.20 am Spilogale

Rockslide 6.30 am New Juv. ♂ (1272 - DIED).

with R.C. + Metofane.

In lab: Sedated the 4 newcomers, took blood  
via Heart Puncture and Washed mouth with  
0.25 ml Dist Water for Saliva Sample.

♂ 1269 U. Sp. 263g, 0.5 ml blood.

♀ 1270 L. Sp. 145g, 0.4 ml blood,  $\frac{1}{2}$ " wound on 3rd shank

♀ 1271 Rockslide 175g, 0.4+ ml bl.

(PAK 153)

♂ 1272 " 187g, Died under Anaesthesia, Tissues

Held onto the other 4 tagged rats to prevent  
recapturing tonight. Gave all 7 paper bedding  
and Aspen leaves for the night.



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## Journal

Between 5.30 and 7pm set traps at:

Sept. 11  
cont.)

U. Spring - (6), L. Spring (3), Rockslide - (4),  
and X89 - (5).

10-11.30pm: Checked all traps, reset sprung ones.

U. Spring New Juv. ♂

X-89 at 2215 PST ♀ 2230 276g Imperf. <sup>Not</sup> last.

L. Spring Spilogale again, (No Stink this time)

Sept. 12 7am: Started checking and lifting traps.

U. Spring (5) ♀

L. Spring (3) ♀

X89 (5) 0629 PST ♀ 1220 234g

Imperf.  
Not last.  
little Fur Dunge  
on rump. Short  
Tail.

" 0638 " ♂ 1223 392g

Rockslide (4) New ad. ♂

lab: c. 10am (0900 PST).

♂ 1273 183g A.Sf.

+ 0.25ml R.C. @ 0849 PST

Took c. 0.9ml Bl. via H.P. @ 0900 ALSO  
+ 0.5ml RC @ 0915 SALIVA.

♂ 1274 350g Rockslide Took 0.5ml Bl. via H.P. "

Released all rats by 1pm except for 1273 & 1274.

L. Sf. ♂ 2179 435g

" ♀ 1270

U. Sf. ♀ 2186 288g

Imperf., Not last.  
" , Stopped tail <sup>in part.</sup> few whs.

" ♀ 2187 287g

" ♂ 1269

Rockslide ♀ 2227 241g

" , Not last.

" ♀ 1271



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Sept. 12 The Mammal Class (200163) from Berk-  
out.)aley arrived in the afternoon. Patton and  
Lidicker led the class with David Ribble and  
Claudia Luke as TAs. Unfortunately, Claudia's  
van got wrecked in a collision while turning  
off Hwy 89 onto the Sagehen Creek Rd..  
Luckily nobody was hurt despite the fact  
that both vehicles were totalled.

I helped Ribble's group setting Mus. Specials  
and Macabees in the evening. We also set  
(Tomahawks)  
8 traps at Mile 4.2. Lidicker's group  
also set 5 more at the Rockslide. The  
only rat caught on the 11pm trap-check  
was:

♀ 1271 at the Rockslide.

Sept. 13 After breakfast all traps were checked  
and lifted:

♀ 2227 at the Rockslide (5 Traps).

new ♂ 1276 " Mile 4.2 (8 Traps).

In the afternoon everybody headed for Chilcoat.

1.6 Mi N.E. Chilcoat, Plumas Co., California (5200ft)

There was a superabundance of fresh  
woodrat urine in the lge Boulders at the  
neck of the Canyon. I marked an ad ♀  
(1102-1101) and 3 juvs here on April 30 last.





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Sept. 13 Altogether, we set 14 Tomahawks at the  
ent.) neck of the canyon and 3 more on the  
upper N. side over the grove of small  
Aspen.

Sept. 14 Checked and lifted all traps after  
breakfast: We caught 7 bushy-tails (inc  
2 recaptures) at the lower site and 1 at the  
upper. Weighed, Tagged & Released.

### Lower Canyon WT.

♀ 1102 - 1101	417g	imperf.	not lost.
♀ 1103 - 1105	302g	"	"
new ♀ 1277	321g	"	"
" ♀ 1278	282g	"	mullch.
" ♀ 1279	302g	"	"
" ♀ 1280	267g	"	"
" ♀ 1282 <sup>(Broke 1281)</sup>	319g	"	parous (e.s. notched)

### Upper Canyon

" ♀ 1283	306g	"	
----------	------	---	--

Everybody, headed back to Sagehen by 10am.  
The class of 15 continued with their study  
skins at Sagehen. Cathy (came up with Carol  
Patton Fri night) and I left before the  
rest of the group around 1pm. Got  
back to Berkeley around 4.30.



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## Journal

### Hastings Natural History Reservation, Carmel Valley, Monterey Co., California

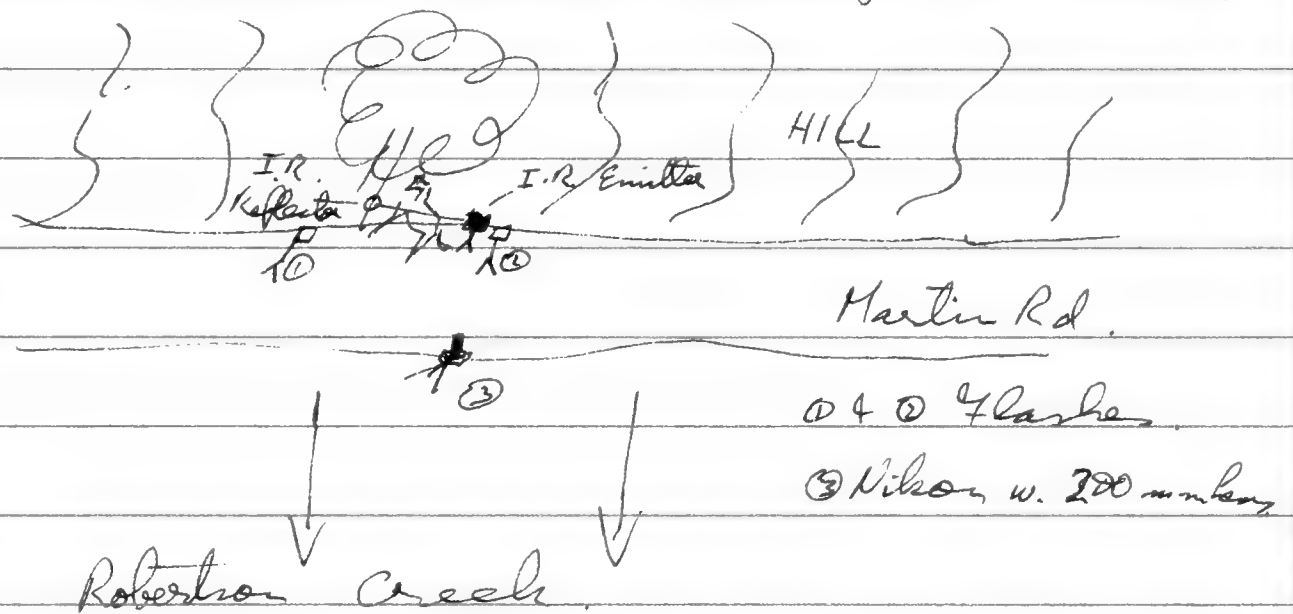
Nov. 29 I drove down from Berkeley with Cathy yesterday. Tim Patton also came to Hastings with Tim Ryan, his prospective Post Doc from U. Mass. at Amherst. All four of us trapped and weighed woodrats at Houses 1 to 99 in the Long Field last night. It drizzled a little around 11 pm and I wondered if some of the woodrats were affected by the dampness. Plan to re-trap houses 1 to 26 tonight to check on "dampened" woodrats.

Alan (the caretaker on the Tregua Ranch) noticed drag marks on Martin Rd when he was heading out to the Hwy (616) in the morning. He suspected a lion kill and found the carcass of a freshly killed deer 1/10 mi down the Rd from the start of the Drag. He called Tim Griffin re the kill. Patton, Ryan, Cathy and I visited the kill at around 10 am. It was located a few hundred yards inside the Martin Gate in deep leaf litter beneath a med. sized live Oak. The Thorax was opened up on the l. side, Some skin, the heart and one lung were gone. I took a lot of photos of the carcass, the pugmarks the site of the ambush, and also the drag marks. Around 11:30 am I decided to give Ian Tait a call in Bakersfield. He immediately



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packed his photo equipment and headed for Hastings. When he arrived it was getting quite dark. He set up an infra red trip beam across the carcass, used twin Vivitar 4 flashes and a 200mm lens on his Nikon (placed on Robertson Creek Side of the Road)



Nov. 30 6.20 AM Ian and I checked the carcass & camera. 8 shots had been taken. I finished my roll of Kodachrome 64 (36) on the scene. The I.R. set up would not function properly anymore so Ian dismantled all his gear.

Cathy and I came back to the scene around lunchtime and took <sup>(6)</sup> plaster casts from the best pug marks. We also took a bobcat cast as well. I also skinned this deer's neck.

Nov. 31 I called Hastings and asked Mark Stanback to remove the head of the deer and to freeze it for me.

A few Days Later. Heard from Ian that we got 3 shots of an adult lioness and 3 of a med-sized cub. We plan to publish a pictorial essay. Nat. History Perhaps.



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Journal

Hastings Natural History Reserve,  
California





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## Journal

Hastings Nat Hist. Res.

around 11:30pm

Jan. 4th

I was called at home in Albany by Mark Stanback. He and Nancy Popkin were returning to Hastings when they noticed a woodrat (072257) sitting at the side of the lane (close to H1) near the Y. Mark approached him on foot and he eventually tried to crawl away using only his front feet. He didn't have any power in his hind-quarters. He didn't squeal when Mark lifted him by the base of the tail and he didn't have any outward signs of injury. Mark placed him in an aquarium with bedding and food in the hope that he would recover. He died 2 days later.  
Cat # PAK 159.

Jan 13

8pm Saw ~~the~~ 14 figs come across the lane from Gate Fld into the Long Field (around the Spider Tree). Many of the figs were large. I think 5 or 6 sows were present. I walked to within about 30 yds before the headed back of Gate Fld Ravine!

Jan. 14

While Trapping in the area of the 2nd Crossing for the first time saw a large bobcat eat a gopher in Horsetail Fld. Approached him(?) to about 50 yds, he headed up into the chamise:



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## Journal

### Sagehen Creek Field Station, Nevada Co., California

Feb. 14

Drove to Sagehen in the morning with Cathy. Jeff + Debbie Groth, Claudia Luke + Suzanne Morse also drove up. Part recreational and part field study.

Joe Thornton told me that he trapped ♂ #1273 in the Field Station kitchen on Feb 3, 1987. He translocated the B. Tail to the Rockslide.

Feb. 15

About 6 more inches of snow fell last night. (Our 3 pick up trucks are out at Hwy 89, we hiked + skied in (not more.)) I used snow shoes to inspect the U.S. Spring lot of snow, couldn't see any rat-sign. Ditto for X89 which I checked in the afternoon.

Feb. 16

Jeff finally managed to net 3 crossbills (he had a decoy bird in a cage). He weighed, banded, recorded their call notes and released them. Lot of crossbills around of at least 2 call types: Types 2 + 5 (J. Groth). Seems there's a good crop of lodgepole Pine cones.

We paid Joe Thornton \$4/person/night. He loaded all our gear in a big sled behind his snowmobile and towed it to the Hwy. Heavy Traffic all the way to Auburn. Got back to Berkeley at 6 pm.



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Hastings Nat. Hist. Res., Carmel Valley, CA

Apr 15

Arrived 2 pm. Decided to try and trap ♀♀ only in the hope of picking up some immed. prior to parturition. Trapped 29 houses (58 COB-baited traps) between the Y and the 1st Crossing. Waning moon rose around 10 pm so expected to catch a lot of animals in that 2 hr window of darkness.

Caught 15 ♀♀ and 4 ♂♂ with only one case of a double capture at the same house (#118).

Got to bed around 1:30 AM (0030 PST).

Apr 16

Slept in until 0900 PST. I forgot to mention yesterday but I brought down 40 more collapsible Tomahawks from Berkeley 27 from the F.S.B.R. belonging to Steve Glickman (he OKayed it) and 13 more from JLP. This is in addition to the stack of traps I already have from the MVZ and Glickman. I must recount them soon.

Spent the day updating my Capture Location Chart for Long Field Woodrats. I also renewed my efforts to recapture ♀♀ I missed last night. I also want to keep tabs on heavily pregnant females from last night.

While updating my Capture Chart I came



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16 (cont.) across my most extensive dispersal event yet: ♂ 1192/93 recaptured March 28, 1987 at house 101A, born at H1 and last captured there on July 8, 1986. He has covered about 2000 ft but more to the point, how come I have not captured him in the intervening 8½ months?

17 Left 10 traps open all night at the Spider Tree and 2 at H136 as well. But had no more rats in the morning. I was trying to catch a visiting (?) tagged woodrat in the Spider Tree. I also caught a 62g juv ♀ (1384/85) with her mom (1229/30) at H130 last night. Must continue trapping for any sibs.

Counted all my traps and marked their locations: MVZ Tomahawks - 59 rigid & 63 collapsible (incl 13 from JLP on Mon. last); Psych. Tomahawks - 16 Rigid & 61 Collapsible (inc 27 from the F.S.B.R. w/ Glickman on Mon.). Total of 199 altogether it would be 200 only for I lost that one trap (Psych. Collapsible Tomahawk) on Sun. All the Psych. traps are painted bright green on the treadle and/or ID plates (did the latest 27 this a.m.). I also marked the 13 from JLP. with white paint. The previous 50 MVZ collapsible Tomahawks comprise 25 from Bob Jones and 25 I bought in 1984.

Mark Stanback climbed the Spider Tree





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Apr 17 (cont.) (H5-9) for me and put a 100' plastic clothesline thro' the pulley for a fourth attempt at a rat-proof trapping platform system for arboreal houses. So far the rats at 5-9 have chewed through 3 diff. thicknesses of cord.

I caught a big beautiful Coast Horned lizard Phrynosoma coronatum on the stepping stones in front of the Red Hze. Enlarged postanal scales indicate that it is a ♂. He weighs 42g and has a SV length of about 90mm. This is the first time I've actually seen this species let alone at Hastings. I did see the Desert sps P. platyrhinos near Pisgah Crater in May of 1985 with Tom Wake.

Between 1700 & 1900 PST I set 130 Tomahawks at 68 rat houses. Decided to hit the sack early and then get up and start checking traps at 4 am. I was a little worried by the weather however since a dense wet fog was moving in.

Apr 18 Got up 4 am. <sup>0300 PST</sup> Grass was heavy with dew but all the woodrats were dry. I caught 10 ♂♂ and 18 ♀♀ and finished up by 7:30 AM. I also picked up another disher last night: ♂ 1112/13 at H136 last trapped at the Spider



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Journal.

Apr 18 (cont) Tree (H5-9) on May 12, 1986. (11 months absence<sup>???</sup>).

Around 6pm yesterday evening I heard what I thought was a child bawling on Haystack Hill / Pearson Fld. Went on for about 2-3 mins. Went to investigate but didn't see any 2 or 4-legged malcontents. Could be a Bobcat or maybe even a Mtn. lion. Again at about 6.30 am I heard a single bellow/roar from Haystack Hill. I wonder did both of these sounds emanate from the same source?

The. H.N.H.R., Carmel Valley, Monterey Co., California

Apr. 20 Left MVZ at 2pm and headed for Hastings with Anne Brooke. (Anne has just completed her Masters on Tent-making Bats (Costa Rica) with Tom Kunz at Boston Univ., and has offered her assistance to me for 2 mths before entering the Ph.D. program under McCracken at the U. of Tennessee.) Stopped off in Salinas for supplies and arrived in Hastings c. 5.30pm. Helped her move her stuff into the Bush Hse.

re was massive midlock on the Nimity (I880) in Oakland after a big paint spill. Had to detour via 580.

From c. 6.30pm to c. 8pm (1730 - 1900 PST) we set traps from Hses 1 - 98. We had dinner at the Red Hse. Introduced Anne to M. Stanback, N. Popkin, Cindy and Nita. We started checking traps around 2030pst and had them all finished + closed up 2 hrs later. Picked up another 8mth absentee (071185-84) at H1.



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## Journal

Apr. 21

Spent the morning and early afternoon updating some field notes at the Red Hze. At 3pm got hold of Anne and we set 6 traps in the L. Oaks way up Central Canyon (Noyce Ranch, NW of Blom Pond). We also set 11 at 9 freshly marked Hzes on the E. + S.E. sides of Haystack Hill. We then continued with the intensive trapping program in the L. fld. Anne cooked noodles + veg for dinner. We went back out and checked traps from about 10.30pm to 1am. Left some traps open all night (esp on Haystack and the Noyce Ranch).

Wed, Apr 22

Got up @ 7.30. Picked up Anne from Bush Hze Recapt. ♀ 1304 in Central Canyon. We also tagged 2 new rats on Haystack Hill (Hk, ♀ 1391/92; H 9, ♀ 1393/94). Spent most of the day continuing my "reclamation" of my individual trapping records/life histories.

5.30pm started resetting traps. Anne did the traps in Central Canyon, on Haystack Hill and from 201 - 210 while I set traps for a variety of ♀♀ (+ young) and some ♂♂ in the long fld. While doing so I found ♂ 1386-1356 dead on the ground beneath 100A. It's interesting that we heard extensive squeaking/squealing coming from 100A area last night and decided to leave 2 traps open as a result. I didn't notice him this



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morning although he was possibly still alive on the ground then. He could have fallen from 100 A 30'-40' above or he could have got belted on the nose (some hemorrhaging (subcut.)) by a trapdoor and then fallen 7 or 8' to the ground. One of the 3 traps was also on the ground 6-8' away but the other 2 were untouched. Autopsy revealed very extensive wounding on the rump, back, chest and tail (PK Cat # 161). He even had a large infected wound on the left side of the chest. Prep. as a skeletal specimen. We checked the traps in the long field and had most of them closed by 1 am. Picked up a new ♂ (1395-96) at 101A.

April 23

Checked + lifted traps in Central Canyon and on Haystack Hill from 8.30 - 10 AM.

Caught 3 more new woodrats on Haystack.

Anne also found the remains of a Badger in the gully/ravine between H3 & H4. The skull has some tooth marks on the cranium.

Continued updating my individual life histories. Around 5.30 we started setting 25 traps on Sch. Hill (Hears = 331 - 355, trapped for 1st time). We also set 55 traps for specific ♂♂ + ♀♀ in the long field.

Checked L. fld traps from 11 pm - 1 AM. Got hold of 2 ♂♂ (1164 + 1289) at H2e 87. The





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former had 2 large infected wounds on l. flank (ant. to l. thigh). The abdomen may even be pierced. Weighed only 212g and his testes were relatively small c. 12mm. He was also burdened/infested with many fleas. ♂ 1289 on the other hand had no wounds.

Apr. 24 8.30am - 9.30am: Checked and closed all 25 traps on Sch. Hill. Caught 3 new ♀♀ and 2 new ♂♂ but no emigrants from the Long Field.

Saw a Whiptail (Cnemidophorus tigris) eating a lge Jerusalem Cricket beneath the Caenotus between the Red Hse + the School Hse. First whiptail I've seen in 1987. That brings to 4 species of lizard I've seen in the past week (Phrynosoma, Crotaphytus, & Sceloporus as well). I still have to see a skink (Eumeces skiltonianus) however. I've also seen 2 King Snakes (Lampropeltis), 1 Racer (Coluber) and 1 Garter Snake (Thamnophis) in the past few weeks. No Pituophis or Crotalus yet. Finished updating my life history notes by 2pm.



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## Journal

Thurs  
24 Sept.

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co., CA.  
left Berkeley c. 10.30am, arrived Hastings c.  
2.30pm after stopping off in Salinas for supplies.  
Reservation is very dry. Poison Oak is red  
and losing all its leaves. Heard from Ray?  
and Mark Stanback that the Blue Oaks and  
the Valley Oaks are producing plenty of  
acorns. It will be interesting to see if  
the woodrat breeding season will start  
up again and track the acorn crop like  
the Acorn Woodpeckers. Started setting  
traps around 5pm. Set 1 Tomahawk at  
each active Hse between Hse 1 & 99 - 53  
traps in all. Found some <sup>bur,</sup> skin + bones - including  
rostrum with teeth - of a juv. Neotoma on the  
ground below Hse 13 (i.e. right at the Y).

Fri.  
25 Sept

But who is the mother of this specimen  
(Cat # PK 169)? Could be either ♀ 2267 or her  
daughter ♀ 1188. lot of Coffeeberry seeds in fox scat.  
Got up at 4am (0300 PST) and went out  
to check traps. V. dark (New Moon 2 days ago)  
and the dense fog was precipitating as a fine  
mist. 9/13 Ad. ♀♀ were perf and 2 were lact.  
also caught 2 new juvs.

Went over to the Robertson Place (Mark +  
Shorty's) around lunch to look for old woodrat  
middens in the rock outcrops. Instead saw  
a young boar rooting for acorns under



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## Journal

4<sup>th</sup>  
25 Sept  
(cont.)

the oaks. Came back and got Tom Kucera's rifle (Ruger M77 30-06 with Bushnell Sportview Scope). The boar was still rooting under the oaks up near the fence (W of House). There was another Yellow/Black pig with him. I moved downwind of the pigs and edged towards them along the chaparral. Stood and waited about 35 yds away from the oaks. Both pigs came into view but I think they got my scent and were a little nervous. Took aim at the half exposed chest of the young black boar and fired from a standing position. He bounded out into the open with both forelegs broken below the shoulder. Lousy shot. He was too feisty to finish off manually so I shot him again through the chest. I then dragged him downhill to my Pickup Truck - he was fairly heavy (about 150 lb), starting to put on weight and his coat was in good condition. I butchered him in the lower Barn and I kept his skull (Cat# PK 171) and his reproductive tract (for Zoo 163/183).

Then (6pm) I was able to get back to my real duties. I set 60 traps, mainly in the lower long field at Hres 100A → 138, and 201 → 210. Went to bed at 9pm exhausted.



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Sat.  
26 Sept

Got up at 4.30 am and headed out to check + close my traps. Had fairly high trap success: - caught 18 woodrats in all. I also caught 4 <sup>new</sup> immigrant adult  $\sigma\sigma$  at Hzes. 117, 201A, 210 & 134. Is this a  $\sigma$  response to the  $\phi$  reproductive response to aspen abundance. At 0453 PST a noisy pig passed me by on Haystack while I was working on a new  $\sigma$  at Hze 117. I could not find that same pig, <sup>however</sup> when I went looking for it again about an hour later. I did find an owl pellet, beside one of the telegraph poles on Haystack Hill path, with the dentaries and some bones from a juv Nestoma (Cat#: PK 172).

Skinned the head of the pig in prep. for transport back to Berkeley tomorrow (with the meat).

5.30pm Started setting traps at specific houses for selected (i.e. missing) woodrats. At Hze 98, I found a partial skull (Cat# PK 173) with well worn molars (from a lge old  $\sigma$ ?) left on top of the trap I placed there on Thurs. evening. A gift from the current occupant ( $\sigma$  1192?).

More surprising however was the discovery of an active house immediately





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downstream and across the creek from Hzes 101A and 101. The house is located in the roots of a lge live Oak and has a lot of fecal pellets on the creek side. Lindsay + Tavis' H36 marker is still in place, as is Lois Greens Marker # 2223. The main entrance is between some lge roots on the side of the creek, but there are 2 other entrances dorsally. Not much other cover, apart from the lge live Oak itself, a little defoliated poison oak and some shrubs. Lindsay + Tavis refer to this House (36) on P. 106 of the 'Book'. I set 2 traps (1 on each side) and I am tentatively naming it Hze 101B (By my Scheme, in relation to 101 & 101A).

I also collected some old compacted latrine debris from beneath one of the arb. houses in the Spider Tree (5-9). Bill Rainey wants it for an albumen assay. Since it also contains some woodrat remains, I am giving it a Catalog # (PK. 174).

Sun.  
Sept 27

Got up at 4.30 AM and went checking traps. Got nothing at 101B but an immigrant ♀ at Hze 15. Saw 3 Pigs at c. 11am under Oaks junction of Hartin Rd. and Robertson Rd. Headed to Berkeley at 11.30am.



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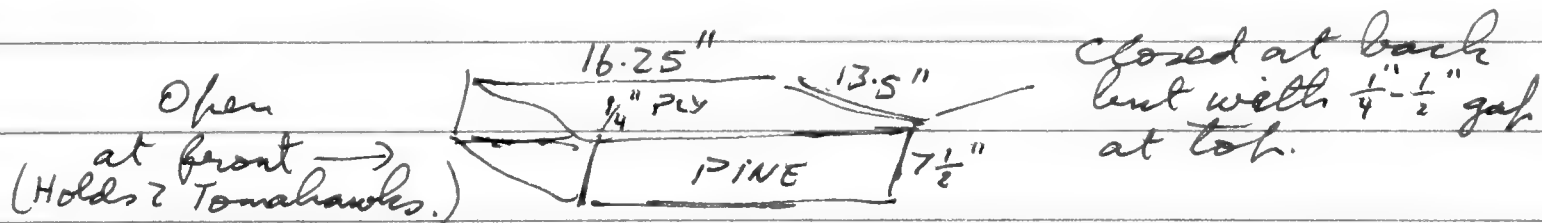
## Journal

Thurs  
Oct. 29

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co., CA  
Left Berkeley 2.30pm arrived Hastings at about 6pm. Too dark to set any traps - the clocks changed back from Daylight-Savings Time (PDT) to Pacific Standard Time (PST) last weekend. In any case the skies are very heavy with rainclouds. Hastings got a few inches of badly-needed rain over the past week or so.

Fri.  
Oct. 30

Started assembling my trap-shelters in Walter Kaenig's Garage. The MVZ gave me \$200 towards the purchase of plywood and pine for 100 Two-Trap Shelters. Bob Jones helped me a week or so ago to cut the <sup>(7½")</sup> pine planks into 16" lengths and the ply into 16.25" x 13.5" & 13.5" x 7.0" pieces for top, bottom, and back.



Got 30 assembled by 3pm and put them out in long field at active houses 1 to 76.

Jim Griffin showed me the remains of a dead bobcat across the creek from the Lower Barn. Pretty rotten right now but I intend to come back for the skeleton. Met Mark Stanbach's new field assistant Connie Adams (from Up-State New York). I also picked a box of Q. lobata acorns for preference expt.



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Oct 30  
(cont.)

2200 PST. Muffled up I went out to check the 23 pairs of traps <sup>-(in shelters)</sup> set at Hze 26-76. Nothing at 68, 69, 71, 73 & 76. Very bright but overcast too,  $1\frac{1}{4}$  Moon up in Southern Sky. Also heard a group of pigs foraging and squealing downcreek (maybe Pearson Field or under oaks near Hze 100C).

Decided to pack it in and come out early and bring the rifle for the pigs.

Sat.  
Oct. 31

0420 PST Started checking traps again. No sign of any pigs however. Caught 13 woodrats (6 ♂ : 7 ♀) in all and collected all their feces from the bottom of the trap shelter boxes. Ranged in pellet number from 7-110. It occurred to me that I could estimate Neotoma activity if they defecate at a fairly constant rate. First I must find out what that rate is and then I can estimate how long each animal has been in a trap. I also want to use the fecal pellets for dietary analysis. It would be useful to know the passage rate and whether they are coprophagous as well.

I <sup>caught</sup> ~~got~~ a new ♂ (# 1521-22, 223g) at Hze 60; ♂ 1233 moved upfield from H50 to H26; ♂ 1382-(1523) moved across long field from H.134 to H64; ♂ 1404-05 moved from H.331 on School Hill to H.136 on Lane Side of long field.



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## Journal

Oct. 31  
(cont.)

Had to go into Carmel Rancho in the morning to get some more wood glue for the Trap Shelters as well as food supplies.

Assembled 30 more trap shelters in the afternoon. Connie Adams helped me distribute them and set traps at Hzes 79 to 126 (incl. 130, 132 + 134). Finished by 0545.

Sun.  
Nov. 1

0500. Picked up Connie at the Bunk Hze and we proceeded to check and close all 60 traps. The trap shelters seem to be a roaring success. I may even have increased the odds of catching any given rat. We caught 20 woodrats at 19/30 houses (double capture at 116). Had another new ♂ (1527-28, 213g) immigrant at H. 109. I also caught a new 179g ♀ (1525-26); I think she is probably the daughter of ♀1145-46 who was last. (♂ had a jaw<sup>87g</sup> ♂ (1505-06)) on Sept. 25.

♀1171 has disappeared from H. 103A ~~for~~ since Sept. 27 and has been replaced by ♀1453-54 from H. 101A upcreek. We also collected 18 more packets of fecal pellets - ♀1145-46 left no fecal pellets in the trap shelter. The count this time was from 1 (♀1453-54 @ H. 103A) to 257 (♀1197-98, ♂1507-08 @ H. 116).

In the morning I put another twenty trap shelters. Then Connie helped me





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## Journal

Sun.  
Nov. 1  
(cont.)

run transects across the study-site from about H. 25 to H. 97. We started at every third one of Patton's nearest Long Field grid markers - i.e. C59, A56, A53, A50, C47, C44, D41, D38, C35, C32, C29. We ran 11 transects in all, 30m apart and noted dominant cover, extent of canopy, and the position of the creek. I must see Jim Griffin about getting an accurate vegetation map of the study site.

From 3.30-5.00, I put out the latest 20 Shelters, and set traps at both ends of the field (see trapping record). Jim Griffin brought me my extendable aluminium ladder yesterday. It reaches to <sup>(max standing height)</sup> 13.5 ft. although the M.V.Z. apparently ordered a 20.0 ft one. Is someone trying to save a few \$? <sup>Bullshit, it is 20'</sup> I also took a hike up School Hill with rifle but didn't see any pigs munching on the overwhelming acorn crop. From 7-9 pm, I finished assembling the remaining 20 trap shelters. I now have 100 ready for action, and 80 are already in the field. I also intend to start using 10-20 of them immediately at outlying houses looking for dispersers.

10.15 pm: Started Checking Traps. Caught only 4



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## Journal

so left most of them open until morning. Did however catch another new ♂ (1529-30, 229g) at 2A (The Sycamore at the V) and ♂ 1481-82 who has moved from the Spider Tree (H.5-9) to H.15 since Sept. 27.

Mon.  
Nov. 2

0500 Went out and started checking and closing traps. Still raining, but in a more or less steady drizzle. It ~~was~~ is very dark however, and it should remain so for another hour. My tape recorder batteries packed up after 1 hour and I had to revert to my Trapping Record Sheets. Saw a short, stocky and very pale-colored bobcat (♀?) on the lane at H.136. Jumped up off the lane into Gate Field. There were also some big oak branches down on the lane ~~at~~ <sup>near</sup> H.2e 134. I didn't catch very many rats: only 8 including a recapture of ♀ 1460-61 in the Spider Tree (H.5-9). It seems that Rat Activity is certainly curtailed by the rainfall. It's great though that I can get this data - thanks to my 100 new ply + pine Trap Shelters - all 8 woodrats! were snug and dry inside the shelters. I continued to collect fecal pellets also.

Had an interesting capture at H.118 at 0614: I caught a new adult immigrant ♂ (1531-32, 284g).



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## Journal

Mon.  
Nov. 2  
(cont.)

He had at least 2 dozen white spots (c.  $\frac{1}{4}$ " diameter) dispersed through his dorsal fur. They were especially noticeable on the rump. He is the most "Dasymys"-like Euthere I have come across. When I released him at H. 118 at 6.30 he did not return to 118 but headed upstream along a downed branch thro' the grass and undergrowth. As he did so an immature Cooper's hawk flew from across the creek towards the lane. It landed in a small bush. "Dasymys" then dashed across the Creek Bed towards H. 117. The hawk swooped down after it. I yelled in dismay (because it would have been my fault if the rat got nailed). After about 15-30 sec (don't know, seemed like a long time), the hawk flew up and away to a nearby bush (Elder?) without "Dasymys". I searched the area where the attack occurred but I could not find a dead or injured "Dasymys".

Once I packed everything away, had a shower & breakfast (ie 8 am) I headed back to Berkeley for my T.A. commitments w. Zoo 163/183 Mammalogy. Arrived in Berkeley 10.45 am.

Tues.  
Nov. 3

Bob Jones told me the spotting on "Dasymys" may result from a previous Scabies infection. I will try to recapture him for a photograph on Thurs.



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## Journal

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co.

Thurs.  
Nov 5

0800 left Berkeley, 1200 arr. Hastings after stopping in Monterey for Supplies and a bag of COB. Still raining off and on with grey overcast skies at Hastings.

From 3-5 pm set traps (in shelters) at 210, 209, 207, 204, 202, 201, 120A, 118, 117, 114, 119A, 102, 103A, 101B, 101A, 100C & near 100A. I used my new 20' extension ladder for the first time. Used it to investigate a hole 15' up in a Red Willow over H.120. Could see droppings and nest material in the upper (sheltered) part of the cavity. Also from my lofty vantage point, I noticed a new Hze in Bramble & Klms between 120 & (defunct) 119. I am calling it 119A and I set 2 traps there.

Around 5 pm walked by the Robertson Place to Martin Rd. in search of S. scrofa. Rained and drizzled the whole time. Didn't see or hear any forkers.

Fri.  
Nov. 6

0500: Overcast morning, stopped raining, bright, full moon setting behind Haystack Hill at around 0600. I only caught 7 woodrats but I caught a 55g juv ♀ (1534-35) with her Mom! (♀ 1380-81) at H.210. I also caught a new ad ♂ (1538-39) and a new ad ♀ (1536-37) at new Hze # 119A. I had dactron bedding in all 36 traps and all 7 rats were mug. Collected 7 fecal pellets from the 5 Shelters.





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## Journal

421  
Nov. 6  
(cont.)

Collected all Tomahawks (15) from School Hill. I will use 40 tomahawks (20 shelters) to start trying to pick up dispersers. I will also get the Mammalogy Class to do same next weekend.

Around 10.30 am met Natasha Grayley and Mark(?) from Monterey. They are shooting videos of California habitats for the Cal. Academy's new California Hall. I showed them my slides of my woodrats, houses, etc. I then spent about 1 1/2 hrs showing them various types of houses - e.g. the Spider Tree; Hzes 11, 15 & 16; Hze 22; Hze 79-94 (esp. H.92 - huge) - and telling them about N. fuscipes ecology and social organization. They intend to come back in Jan. to do some filming. That suits me just fine.

In the afternoon I used the ladder to hammer a ~~flat~~ trapping platform in place 20' up in Live Oak containing Hze 100A. The house is still, unfortunately, about 20' higher up. Set 2 Traps in a shelter there. I also set 2 traps on top of Hze 1B (18' up in L. Oak at the Y) with the help of the ladder. I also set traps at all active Hzes between 1 and 69. 5.30 pm Headed off into Carmel Valley with Stanback, Ribble + Connie Adams for Pizza and an old movie (The Count of Monte Cristo) at C.V. Library.



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Journal

Sat.

Nov. 7 0500 PST Got up and headed out to check all 62 traps. I didn't finish until 08.30 P.S.T. Had few surprises this time: Caught 18 woodrats in separate shelters inc. missing ♀♀ 1501-02 in the Spider Tree and 1519-20 at Hze 15. I didn't catch anything on the platform under H.100A but I did catch ♀ 1188-89 in the traps placed up on H.1B - however I think she returned to H.1. Collected Fecal Pellets from all Shelters except 1: at Hze 58A caught ♂ 1521-22 - no feces and little of C.O.B. eaten - leads me to assume that he was not long in trap. Must find out soon if they have a constant rate of defecation. Also Passage Rate & Coprophagy are of interest of course. Of the 17 pellet samples, pellet number varied from 8 to 84. As usual, I dried all 17 ~~new~~ samples in the oven at the Red Hze.

From 3-5 pm (PST), I set traps from Hze 71-98, 100A, 100C, 101A & 101B, & down at the 1st Crossing. Ribble joined me for dinner at the Red Hze. Before that I hiked all over Sch. Hill but didn't see any fresh pig sign.

Sun.  
Nov. 8

0500 P.S.T.: Checked and Closed all traps. Finished by 0800. Caught 16 woodrats at 31 houses. I collected fecal pellets from 14 woodrats and I also fitted a radio-collar to ♂ 1289-91 at Hze 92. Sedated him



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## Journal

Sun.  
Nov. 8  
(cont.)

first w. Metofane. He is currently the biggest ♂ in the population and I want to demonstrate radiotelemetry to the Mammalogy class next weekend. I also caught a new 162, ♀ (1540-33) at Hze 204. Is she an immigrant or maybe the young of ♀ 1380 (<sup>litter</sup> sib of ♂ 1513-14)? I also caught ♂ 1233-34 at H. 79, this guy is really moving over the past few days. Since late Sept. he has moved from Hze. 50 → H. 26 and now H. 79. After breakfast and a shower, I loaded the pickup and headed off to Berkeley at 0930.

Fri.  
Nov. 13

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co., CA  
1800 PST Left Berkeley on Zoo 163/183 Mammalogy Field Trip to Hastings. In my Ford Astor van I had Marco Salvioni (Lidicker's Post Doc), and 3 Students (Aron Yarno, Kenneth Nybakke, & Paul Dallara). Driving conditions (on 880 and 101 especially) were very poor because of more or less continuous rain. Traffic was heavy and there were at least 3 serious wrecks en route. My van was the first to arrive at 2pm, followed by Patton's ~~Station~~ van, Bernier's station wagon and John Trochet in the 2nd station wagon. Carol Patton & Suzie Peyton arrived c. 2200 PST in Patton's V.W. van.

Once everyone arrived, we split into three



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## Journal

Fri  
Nov. 13  
(cont.)

groups to set snap traps on the Calhoun lines (3 Mus. Specials per Station): Patton's group did the 2 Haystack Hill Calhoun line (35 Stations); Bernie's did the Pearson Field line (20 Stations); and my group (<sup>(Miller)</sup> Sarah, <sup>(Caselle)</sup> Jen, <sup>(Trochet)</sup> John, & <sup>(Hollis)</sup> I did the line on the NE. slope of School Hill (20 Stations). I set a few traps in Walter's garage and caught ♀ 1350-1028 (last capt. there in Feb.) and 2 new young ♂♂ (#1541-42, 185g; #1543-44, 125g) by morning. Actually, I caught ♂ 1541-42 by ~~at~~ 2000 PST. so I used him as an example when I gave a 1 hour presentation to the class on woodrat social structure at Hastings. I also gave them a short slide show of the lioness, cub and deer-hill from Martin Rd. last Thanksgiving. I must write that up as a note soon. I also brought along the cleaned skull of the doe <sup>(Cat # PK157)</sup> as well as the casts of the lioness' pug marks for demonstration.

Sat.  
Nov 14

Getting back to the woodrats in Walter's garage. The 2 ♂♂ are probably both the offspring of ♀ 1350-1028 but they must be from different litters judging by the size difference (185 : 125g). I caged all 3 together in a larger tomahawk w. cuttings (approx. equal amounts) from Live Oak, Valley Oak, (collected 105 fecal pellets from ♀ 1350 + ♂ 1541)



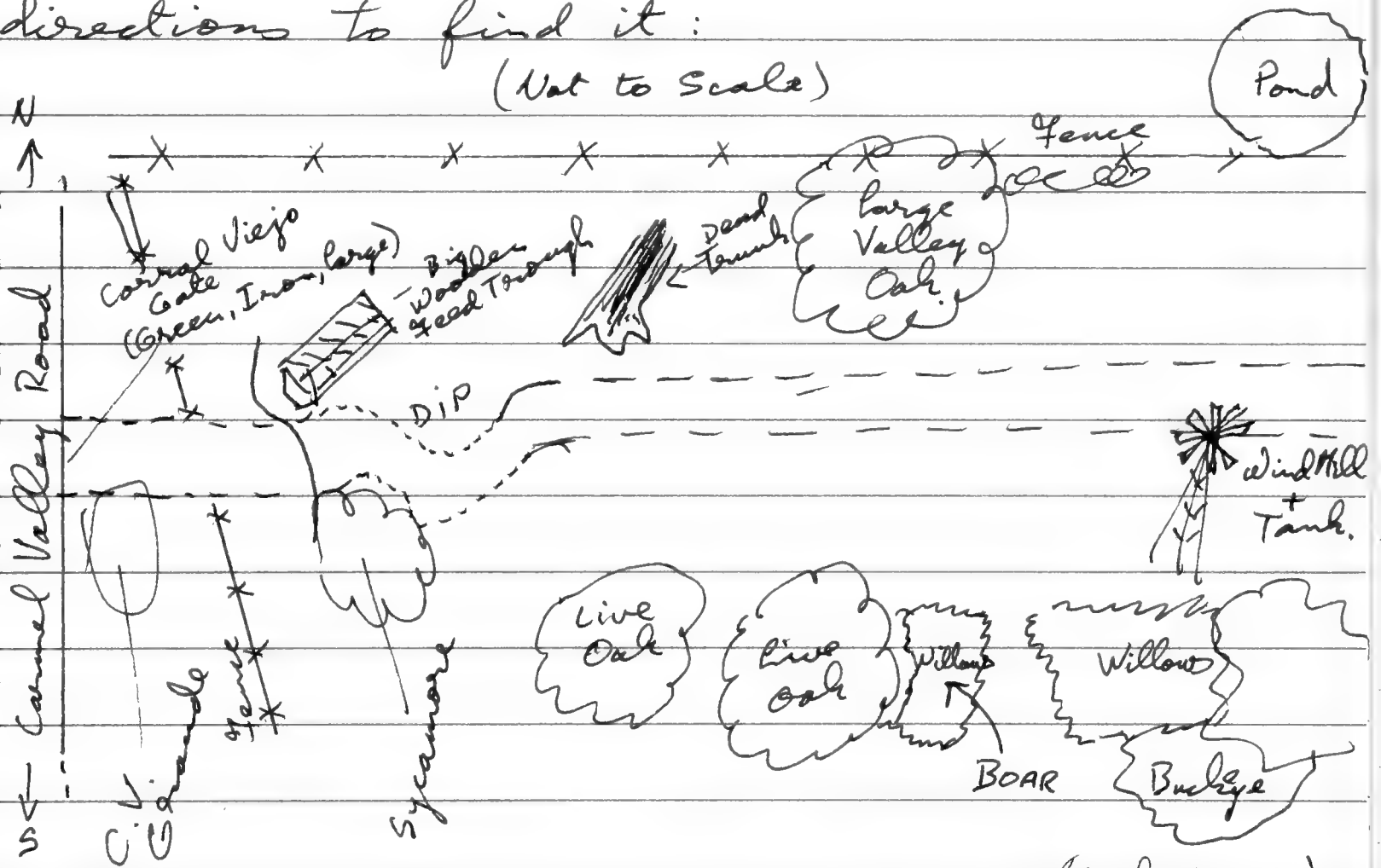


1987

Journal

Sat. and Blue Oak and 14 Blue Oak acorns at  
Nov. 14 0800 PST. Got up at 0600 PST. however and  
(cont.) did a clockwise circuit around <sup>the base of</sup> School  
Hill (i.e. to Robertson Place → Martin Rd → The Lane →  
Red Hze) in search of a ♀ Sus scrofa for  
the class (expro. tract example) and for  
dinner. Didn't see any pigs, however, Nancy  
Popkin told me she found a large dead  
boar in Cerral Viejo and she gave me  
directions to find it:

(Not to Scale)



Thanks to Nancy's accurate map, Marco, <sup>(Salvioni)</sup> & I found the boar with ease at about 0930 P.S.T. He is a large Tusker, ~~but~~ his whole head & neck region is literally a seething mass of maggots. He smelt a bit but I've smelt worse. I could not see any obvious wounds on the exposed left side of the chest and



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## Journal

Sat. belly. He seemed in reasonably condition  
Nov. 14 though - not a ridge-back - so I bet he  
(cont.) has a bullet wound on the other side or  
in the head-neck region. I will try to  
examine the skeleton - if it is still there -  
in a few weeks time.

I forgot to mention that I also  
took 4 students (<sup>(Klein)</sup> Karen, <sup>(Caselle)</sup> Jen, <sup>(Yarns)</sup> Aaron and  
<sup>(Zach)</sup> John) down the long field to radiotrack  
♂ 1289. Unfortunately the commotion  
of 5 people, albeit trying to be quiet,  
caused him to return<sup>n</sup> and stick close  
to Hze 85. We'll try to do more telemetry  
tonight but I would like to dust him  
with fluorescent pigment first.

Took 4 students (<sup>(Caselle)</sup> Jen, <sup>(Yarns)</sup> Aaron, <sup>(Klein)</sup> John, & <sup>(McKish)</sup> Ian)  
for a hike by Mark + Shorty's up Buckeye Hill  
and then down through Chamise, Oaks and  
Buckbrush behind the Schoolhouse. We saw  
various tracks, a Trashier but no figs.  
12 of the students set pairs of traps  
for woodrats. Meanwhile Bernie Peyton  
helped me set traps at 26 houses in  
the long field. Tim Patton and some students  
set up 2 mist nets for bats at the  
now-empty Blom Pond.

1830 P.S.T. captured ♂ 1289-91 at Hze 82 and dusted  
him w. Orange Pigment. Nan Wavra came along to see



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## Journal

Sat. the technique. We also captured ♂ 1336-37 at H. 79  
Nov. 14 but we didn't dust him. We then closed the other  
(cont.) open traps (2 at H. 85) in ♂ 1289's presumptive  
home range. Returned to the School House for a  
great Pasagne dinner cooked by Carol Patton  
and Suzie Peyton. Then Jim Patton gave his  
usual dramatic Peru slide show. It was a  
great hit and even though it was my ~~third~~ <sup>fourth</sup>  
viewing (also Fall '83, '85 & '86), it was as  
refreshing and entertaining as ever.

2230 PST. took 11 students to ♂ 1289's part of  
the Long Field. We followed his movements  
first with Radiotelemetry and then with  
fluorescence-tracking. He moved throughout  
the area. The pigment trail was impressive  
but ~~the~~ some of the students were noisy  
and rather immature. They pissed me off!  
I got them to set traps throughout the area  
to capture ♂ 1289's potential contacts.

Sun.  
Nov. 15 0515 PST. Captured 4 ♀♀ and 2 of them had orange  
pigment from ♂ 1289 : ♀ 1524<sup>(H. 91)</sup> and her daughter  
♀ 1429-26 (H. 94). I continued checking traps down  
field and picked up new individuals at H. 134  
(♂ 1545-46) and H. 136 (♂ 1549-50 & ♀ 1547-48). We left  
Hastings by 1400 PST. I took my crew to Paint  
Cobos on the way home. We saw 3 Euhadra  
and 2 Zalophus. Stopped at Rositas (Salinas) for  
late lunch + beer. Arrived home 1900 PST.



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## Journal

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co.

Thurs.

California.

Dec. 17 Left the MVZ at 0930 and arrived at Hastings at 1230 after stopping off in Salinas for some groceries at Nob Hill Market. Frank Pitelka, Walter Koenig (currently in Tempe Arizona with Janice), Ron Carroll (Nat. Res. System) and Dave Wake were also at the Reservation discussing the issue of housing for the new manager (Stromberg?) with Jim Griffin and Suzanne Schelller. All 6 visited Stanback & I at the Red Hze. I guess we'll get kicked out of here in the near future.

From 3-5 pm, I set pairs of traps at all active houses between H. 25 and H. 98 (inclusive). 37 Houses in all, i.e. 74 traps.

The stormy weather of the past week caused some damage in the long field. E.g. Red. Willow limbs have fallen at H. 96, H. 50 and upreel from H. 45. No damage to any houses though. Seems to me that the weather has also stimulated a spurt of nest building. Noticed extensive peeling of Willow Bark at Hses 98, 96 and 66A.

Dec. 18

0430 Got up and muffled up against the cold<sup>(28°F)</sup>, before starting to check traps. Finished at 0730 PST, Caught 27 woodrats. Collected Fecal Pellets from 9 of them: 27-158 pellets ( $\bar{x}=77$ )





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## Journal

421. Had some interesting captures: New immigrant  
Dec 18 ♂ 1557-58 (213g) at H.71, (had snagged his  
(cont.) R. hind foot in R. of Trap but seemed to  
recover complete use by the time I released  
him); new juv ♂ 1553-54 (117g) at H.25, must  
be young of ♀ 1182-83 (who seems to have  
moved into reconditioned H.28); new juv  
♀ 1555-56 (forgot to write down her wt.) at H.61,  
her mom ♀ 1347-1053 may have moved out of  
H.61 and into H.60; also in that same area  
♀ 1465-66 is lactating as is her aunt ♀ 1387  
- 2300. If those two successfully rear  
daughters it will add a new dimension to  
♀ 1347's matriline: Matriarch, Daughter,  
Grand-Daughter and Great-Grand-Daughter.  
Further, ♀ 1465 is only 8 mths old, remember  
her radio-collared mother (♀ 1247) was maled  
by a predator leaving a high quality house  
to ♀ 1465 (ie. H.62). Also ♀ 1145-46 at H.90 is  
lactating again, I think this is her 4th  
litter of 1987.

Around 0730 PST watched a young 2-point Buck  
chasing 2 Does and 4 fawns around Pearson  
Field. He had his tail raised the whole time,  
mouth open (blehmen?), and he shook his head,  
and kicked laterally and posteriorly with  
his hind legs. This went on for at least 5 mins.



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Journal.

Under the oaks across the creek from Lower Barn. Yeri.  
Dec. 18 Around noon picked up the complete skeleton (Cat # P.K. 175) of the bobcat<sup>v</sup> Jim (cont.) Griffin pointed out to me on Oct 29 (see Journal). All the bones were very clean and I was able to find all of the elements including the smaller limb bones. I also pulled 3 scat boluses from its pelvic cavity.

I then went down the long Field and got a radio fix on ♂ 1289. He's in H. 85. I also saw a bobcat foraging in Pearson Field (for Microtus?). I also saw a Hocking Bird (Minus polyglottus) in elder behind H. 97.

I then drove over to Corral Viejo and collected the skull of that boar (Cat # P.K. 176) <sup>I</sup> checked out on Nov. 14 with Marco Salvioni. It's a large impressive specimen but it is not completely clean yet. So I will not bring it up to Berkeley yet - the smell in the truck would be too nauseating. I'll leave it to "ferment" in a container of damp leaves until I return from Ireland in January. Hopefully it will look + smell clean by then.

Yeri 3-5 pm set traps in the lower long Field: Hzes 101A & 130 to 200. Clouded over early (c 4 pm). Walked up behind the Red Hze looking for wild figs. lot of fresh sign - rooting (bungi? lots of acorns on surface), tracks, + rubs - but didn't see any.



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## Journal

Sat. 0500 Started checking and closing traps. Not  
Dec. 19 nearly as cold as last night ( $44-48^{\circ}\text{F}$ ), due  
to heavy cloud cover no doubt. I trapped  
at 27 houses in all and captured only 15  
wood rats (6  $\sigma$ , 9  $\text{f}$ ). I collected fecal  
pellets from 14 of them. I had another  
lactating  $\text{f}$  (1453-54 at H.103A), like  $\text{f}$  1465-66  
(at H.62), is only 8 mths old. I captured  $\text{f}$  1323-25  
at H.120; the last time I saw this rat was at  
her first capture on Jan 15, 1987 at H.201. I  
captured  $\sigma$  1469-73 at H.117; last captured  
6 months ago at H.126. Where have  $\text{f}$  1323  
and  $\sigma$  1469 been in the interim?

1500-1700 PST. Set traps in the upper long field and  
for various missing rats. I even caught  $\text{f}$  1387  
at H.64 before I was through trapping.

Mark <sup>(Reynolds)</sup> and Shorty came around to the Red  
Hze with a big bowl of Egg Nog. Ribble, Stanback  
and I imbibed too much too long.

2300 Started checking traps. Caught 4 more  
new individuals. Got to bed c. 230 a.m.

Sun. 1000 PST Closed the few traps I had left  
Dec. 20 open in the Spider Tree and at Hzes 15, 16,  
69 & 138. Loaded up truck and headed back  
to Berkeley by 1300 PST.



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California





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## Journal

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co., California

Tues.  
Feb 2

Came down to Hastings yesterday evening. My first chance to check on my woodrats in over a month. I was in Ireland from Dec 23 - Jan 17 and I was busy as Associate for Zoo 107/187 for the past 2 weeks.

Some more branches have fallen along the creek, the most notable one is at H. 32.

♀ 1256 seems to be taking advantage of this wind fall by expanding H32 westwards. Various other bits of willow and oak down near H. 34, H. 73, H. 111. Also more bark-peeling at H. 71, 98, <sup>87</sup>111 and others. Took a few photos (slides) of H. 32, bark-peeling, bark-damage from gnatcatching, and a small Neotoma nest exposed in a hollow of a broken Willow between H. 111 + H. 116. Lots of passerines foraging along the creek. W-crowned Sparrows, E-crowned Sparrows, lots of Varied Thrushes. Also plenty sign from pig-roosting in the long field.

Trapped Hrs 79-98: Seems to be some ♂: ♂ competition going on in that region of the creek.

Wed.  
Feb. 3

Closed the few traps I left open all night, but caught ♀ 1434-35 at H. 97. Tried to clear some access on Sch. Hill near crossings but Poison Oak is very dense in places. Trapped from Hrs 32 - 79.



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## Journal

Thurs  
Feb 4

Continued surveying for and marking active houses on Haystack Hill. Didn't find too many. Most are associated with *G. agri-*  
*folia* in and along the ravines. Trapped lower long field (Hse 102 to 209)<sup>+ new Hses</sup>. Bright moon lit night (like Tues + Wed. night). Didn't catch too many rats, so left a lot open and went to bed early.

Fri.  
Feb. 5

Checked traps from 0700 to 1800. I caught 7 woodrats at the 10 "new" hses on Haystack. One of them ( $\sigma^7$  1511-12 @ H. 221) was tagged at Hse 201A on Sept. 26 (he weighed 213g then, now 256g, gain +43g). Old *Dasyurus* (shotty  $\sigma^7$  1531-32) is still around (H. 119A), his odd coat color hasn't caused his demise yet. I also caught a new  $\sigma^7$  (1570-71) at new Hse # 228 (just S. of 1st crossing).

In the afternoon I cleared access to some more Hses on the side of School Hill (<sup>opposite +</sup> between H. 130 and H. 123). Set pairs of traps at S of these houses (designated 501-505). [The Haystack Hses merely continue the 200 series from the crossings along the lane and N. + W. up onto Haystack. The markers are just 4' Bamboo Plant Stakes with a numbered metal tag wired and duck-taped to the top.]

(senior grad student in Psych.)  
Joanne Pedersen and Karen Klein (Zoo 163 student last fall) came down from Berkeley in the evening. Joanne brought her large



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## Journal

Feb. 5 (cont.) (c. <sup>wide long</sup> 2" x 4" x 2" high) desert iguana encounter arena with her. We brought the arena down field to Hse 88 to test some of the ♂♂ there. We checked the other traps first then at midnight we attempted 2 diadic interactions. We all had previously studied Wallen's description of N. fuscipes' behavioral repertoire (Anim. Behav. 1982, 30(4): 1171-1182. Joanne spoke directly into my tape recorder (we initially planned for 10 mins of observation) while Karen + I shone our white (no red lights available) head lamps on the pair of animals. We dusted one lightly w. orange pigment and gave both at least 5 mins to get used to their side of the arena. We first paired up ♂ 1192 (277g, unmarked) and ♂ 1336 (251g, marked). Both are scrotal and have active Ventral glands, but ♂ 1336 has a wound <sup>(bite?)</sup> on the inside of left hind leg  $\frac{1}{2}$ . ♂ 1192 was clearly dominant to ♂ 1336 (see Diadic Encounter Sheet). We saw a number of the behaviors described by Wallen, most seemed agonistic although Wallen classed some (eg. "climb On Other") as affiliative.

The second diad between ♂ 1557 (237g, unmarked) and ♂ 1505-06 (267g, marked) was a failure. The rats did not interact at all but just huddled up at opp. ends of the arena. Probably stressed by noise and light from the 3 observers. Got to bed around 0130 PST (a.m.).



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## Journal

Sat.  
Feb. 6

Got hold of Joanne and Karen at 0730 PST and we went out to check and close the remaining traps in the long field and on School Hill. We tagged 2 new ♂♂ (1595-96, 1597-98) and new ♀ 1593-94 at Hzes 502, 503 + 501 respectively.

After breakfast I took them on a more thorough tour through the upper creek area, then up Haystack Hill and down through the Chamise to the lane. ~~Both~~ All of us were pretty exhausted at this stage so we took it easy until 4pm, when we went out again + trapped from the Y (Hze 1) to H. 69. Tonight, we would like to pair up a few females.

Around 9pm (2100 PST) we paired up ♀ 1347 with her daughter ♀ 1569-2300. They did not interact at all during the 6 min. observation period. We then paired ♀ 1569-2300 with her niece ♀ 1465-66. They did not interact for 4 mins, but when I terminated the observation they started interacting. We watched them for 5 mins longer and saw amicable affiliative interactions ("Face", Sniffing, and "Contact"). We checked remaining traps between H1 + 69. Got to bed by 2300 PST.

Sun.  
Feb. 7

I got up at 0700 and went out to check remaining traps at Hzes 1, 2A, 5-9, 11, 15, 16 + 68. Packed up all my gear and I headed back to Berkeley at 10am. (arr. 1pm). Joanne + Karen waited or in Hastings until lunchtime to do some bird-watching.





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## Journal

Wed.  
Feb. 17 Hastings Nat. Hist. Res., Carmel Valley, Monterey Co., California  
Waited in Berkeley for Steve Dobson's (he used to work in Hastings on Beechey G. Squirrels, M.S. out of U.C.S.B.) MVZ lunch on life-history variation in Columbian Ground Squirrels. Interesting stuff. Left Berkeley at 3pm., arr. H.N.H.R. at 5:45<sup>(1745 PST.)</sup> p.m. Started setting traps immediately<sup>(1800 PST.)</sup> from Hze. 1 - 62. New moon tonight so expect a lot of captures. Brought a new Sanyo Microcassette Recorder (Model 5495, \$60 at Sierra Imports on Haste St.) to use during behavioral testing [My other Sanyo Radio-Cassette Recorder Model H1770 (also from Sierra Imports) is too large and unwieldy]. Finished setting traps by 1835 PST., dark twilight at this stage - used head lamp to aid in setting traps. Found fresh pig shit near creekbed by H. 62. Jupiter + Venus in Western Sky.

2238 Lot of activity in Spider Tree, saw ~~young~~ juvenile woodrat on branch beside H. 6 - it's untagged. Will place traps actually up beside all four active lises (H. 9 disintegrated and collapsed over the winter) tomorrow. ♀ 2269 + ♀ 1460 were in same trap. Left a few traps (at 11, 15, 22, 36, 51 + 58A) open.

Thurs  
Feb. 18

0715. See 9 deer halfway up Haystack: Chasing and facing-off against each other. Still lots of Varied Thrushes around.

0940 Checked the G.H. Owl nest just N.W. (V. Oak Snag Hole) of the "Lower Bridge" on the highway. No owls again this year.



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## Journal

Thurs  
Feb. 18  
(cont.)

1335 PST. Checking Y-houses for activity.  
Nos 1, 2, 3, 4, 7, 6, 9, ~~10~~ 5 inactive; Y8 + Y10 both  
seem active (Y8 is in a lge Sycamore trunk).  
Nos 13, 14, <sup>19</sup> also inactive; 11, 15, 16, 17, 18<sup>21</sup> active.  
Also 2 previously unmarked hses just up creek  
from Y. 17. Marker #s ~~1, 2, 3, 4, 6, 9~~ 1, 2, 3, 4, 6, 9 + 14 do  
not actually mark houses but were initially  
used as potential trapping stations. This was  
inadvisable and I will lift all seven tomorrow.

Another dark starry night. Cool ( $\approx 32^{\circ}\text{F}$ ),  
clear + calm. Checked traps from 2340 to 0200 PST.  
2357 PST ♀ 1569-2300 placed w. ♂ 1521-22 in upended  
trap shelter together at H. 66. She was more active  
than he, sticks her head sideways in under his  
("lifchesh"?) - she's pregnant.

Fri.  
Feb. 19

0049 PST. Captured new juv. ♀ 1605-06 (81g) at H. 98  
(H. 101, ♀ 1150, in other trap). I recorded 30 seconds  
of her <sup>tagging</sup> protest squeaks - may be useful for  
playback experiments. However, while weighing  
♀ 1434-35 at H. 97 a few mins before, I heard tail-  
rattling coming from over + around H. 98. Was it  
a sib. of new juv 1605-06 or maybe a visiting ♂?  
0115 PST stopped for a short tea + cookie break - the  
stars looked lovely.

0150 PST Started checking the 4 pairs of traps in the  
Spider Tree. It was tricky moving the 20' alum-  
inium ladder around and setting it up firmly  
to access each of the 4 houses. But it was worth



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## Journal

421.  
Feb. 19  
(cont.)

the effort, because I caught a new 323g ad. ♂ (#1610-11) at H.8. I was able to place the trap shelters (each cont. 2 Tomahawks) right beside houses 5, 8 and 7, but Hse. 6 was too high up and I had to settle for placing the shelter in the canopy about 4-5' below Hse. 6. I didn't manage to catch the juv. I saw last night at H.6 though. Got to bed at about 0230 PST.

Slept until 0900 PST. After breakfast I revamped an old wooden shelter/encounter arena that I have used to hold woodrats previously in the lower Barn. I patched up the holes, cleaned it out and replaced a perspex strip along one wall with  $\frac{1}{4}$ " metal mesh. I want to stage some encounters in the Spider Tree tonight.

In the afternoon I lifted those redundant "Y-markers" (1, 2, 3, 4, 6, 9, & 14) and set pairs of traps at Y houses 8, 11, 15, 16, & 17. I'll hit the remaining active<sup>Y</sup> houses tomorrow night. I then continued clearing access to houses on School Hill (across lane from H. 130 and 131). Reset trap pairs at 504, 505, and the newly accessed 506, 507 & 508. I also set traps in lower long field (110-209), and I reset all 8 traps in the Spider Tree.

2200 PST Checked traps in Spider Tree: caught 4 ♀♀ paired them up in 3 diads w. ♀ 2269 common to all 3. The observation period was 5 mins. All 3 were fairly amicable but ♀ 2269 seemed



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## Journal

Fri.  
Feb. 19 to display dominance over ♀ 1390 ("Chin. or Other")  
(cont.) Caught my Spotty ♂ ("Dasymus", # 1531-32) at ?  
H. 202, moved from 119A? Finished by 0030 PST.

Sat.  
Feb. 20 0040 PST. Felt an earthquake just before going  
to bed. I was washing my teeth and it sounded  
I felt as if there was a racoon or a giant tail-  
rattling woodrat on the roof of the bathroom.  
Heard <sup>at 0700 PST</sup> on KVSP (N.P.R. Santa Cruz 88.9 F.M.) that it  
was centered near Hollister and measured 5.1.  
Nancy slept through it.

0700 PST. Caught ♂ 1610-11 <sup>again</sup> in Spider Tree. Paired  
him up with ♀ 2269 and ~~just~~ ♀ 1460. Neither of  
the encounters were as amicable as the 3 ♀:♀  
diads last night, and ♀ 2269 <sup>even</sup> seemed a little  
aggressive at times.

0745 - 0844: Caught 4 new rats, recaptured a ♂  
from last trip ♂ (1595)-96 <sup>last tag</sup>, and recaptured last.  
♀ 1229-30 (last caught at H. 130 in late May, 1987).  
Her daughter ♀ 1384 is still at H. 130 and it is not  
too far away (say 100 m.).

0900 - 0930: Caught 2 new rats and recaptured  
3 old ones at Y(8, 11, 15, 16 + 17). The most striking  
captures were ♀ 1131 - <sup>NEW</sup> (1627) - 282g at Y 16 - and  
♀ <sup>NEW</sup> (1625) - 1132 - 208g at Y 11. Both of these were last  
captured as Hottel (♀ 1131) and Juvenile in the same  
trap at Y 16 on May 4, 1986 (over 21 months ago).

1030 - 1500: Updated notes + records, and  
transcribed tapes at the Red House.





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1988

## Journal.

Sat.  
Feb. 20  
(cont.)

1545 PST: Hses Y19 & 20 inactive. But Y Houses <sup>designated, 14 (new H)</sup> 18, 21, 22, 23, 24 and pair of new houses (1 Arb + 1 Terr) upcreek from 17. Set pairs of traps at all of these 6 houses.

Also set 4 traps in Spider Tree for untagged juv. at H.6. I also set traps at the "130" series <sup>(100A, 100C, 101A, 102, 103, 103A)</sup> <sup>(130, 131, 132, 134, 136)</sup> 127A, 227, 228, 100A → 103A, 201, 205, 116, 98, 96, 90, 64, 61, 28, 26.

1726 PST at H.98 saw a Northern Pygmy-Owl (Glaucidium gnoma) with a <sup>dead</sup> banded Towhee (Pipilo fuscus) in its talons in the Arroyo Willow over the creek in front of H.98. I approached within 6" feet before the owl dropped the Towhee and flew down creek. I removed the band from the Towhee's leg (# 702-57289) and left the warm Towhee corpse on the branch where G. gnoma was perched (hoping it would come back again to feed).

1749 PST. Came back by H.98 after setting traps upcreek at Hses 96, 90, 64, 61, 28 + 26 to find the Owl busy plucking the Towhee on the branch where I left it. I lay down in the grass about 30' away and watched the owl thro' my Binoculars. The owl frequently turned its head completely in a vigilant manner. Hard to know back from front in the twilight.



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## Journal

Sat. due to the black nape shots. The eyes were  
Feb. 20 a bright yellow contrasting with streaked  
(cont.) breast, rust around neck + shoulders,  
and long barred tail when I first saw it  
in brighter conditions about 30 mins ago.

1800 PST: The owl dragged the half-plucked  
Towhee up onto the branch (it was hanging  
previously) and a few mins later flew upcreek.  
I didn't disturb it further.

I should have mentioned earlier that the  
owl was being mobbed by a noisy bunch of  
birds including jays, rufous-sided towhees,  
and varying thrushes.

2230 - 0100 PST Checked traps and closed all  
Sun. except 100A, 4 in the Spider Tree, and the 12 at  
Feb. 21. the "Y" houses. From midnight until 1 a.m. <sup>(0100)</sup> a  
pair of Great Horned Owls were calling on  
School Hill near the 2nd crossing. I tried to call  
them in, but they did not respond to my feeble  
efforts. I captured ♂ 1507-08 at H. 227 (S. of 1st cross-  
ing): he was born in H. 116 (of ♀ 1197-98) and was last  
captured there in late December. I also seem to be  
getting a lot of activity along the School Hill  
side of the long field: caught 3 new woodrats  
at Houses 132, 134 & 136.

0200 PST Still didn't catch that untagged juv.  
at H. 6 in the Spider Tree. Did catch ad ♂ 1610-11 for the  
3rd time though - I wonder where he <sup>(initially)</sup> came from?



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## Journal

Sun.  
Feb. 21  
(cont.)

I caught 6 new woodrats at the "Y" houses. This seems to be a booming population - especially in Ravine on south side of the School House garage. Like with ♀ 1131-1627 and ♀ 1625-1132 yesterday, I picked up ♂ 1133-<sup>NEW TAG</sup>(1637) at ~~House~~ Y14A (new pair (1arb. + 1 terr.) of luses just upcreek from Y17). Upon release ♂ 1133 entered Y14 but then left by another passageway, and ambled down the side of the creek, and entered Y17. He was first captured at Y17 on May 4th, 1986 (like 2 ♀♀ mentioned above + previously). What the Hell is going on in this little population? ♂ 1133 was first captured at Y17 and weighed 305g then, he now weighs 318g (over 21 months later). Such philopatry and survivorship is unusual in ♂♂. It's strange that when I last trapped this area on Dec. 12, 1986, I did not catch any previously tagged woodrat although I did pick up 2 new ♀♀ (1320 + 1322) and 1 new ♂ (1321) which I did not capture this time. But I used Shermans in Dec '86, whereas I used Tomahawks in May '86 and on this trip. I don't think woodrats are too fond of Shermans. I just realized I also trapped the "Y" Hses (again w. Shermans) on April 8/9, 1987 but only caught ♀ 1320 at Y15.

I meant to note earlier that many woodrats at least 3 or 4 were tail-rattling simultaneously along the creek between Houses 80 and 100. This



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## Journal

Sun Feb. 21  
(cont.) also coincided with the calling of the Great Horned Owls. I wonder if this is mere coincidence?

0700 Also saw one group of 18 deer half way up on Haystack Hill near Noyce Ranch Fence, also saw 5 more deer descend to Blom Pond from the Noyce side. Some of the 18 were chasing each other.

1130 am. Leaving Hastings for Berkeley, saw a sharp-shinned hawk (♂) fly into the trees on School Hill (near H. 301) with a ♂ Robin.

Thurs.  
Mar. 10

Hastings Nat. Hist. Res., Carmel Valley, Monterey Co, California  
Left Berkeley around 2.30 p.m. for Hastings with Jeff Groth. Jeff drove his Toyota 4WD Pickup Truck. He is coming to Hastings, for the 1st time, to try and make some recordings of tail-rattling and of squealing by juveniles. Also if we have time we might try to locate the Gt. Horned Owl nest (on the Arnold?). We arrived at Hastings at c. 6 pm and we immediately set pairs of traps at Hzes 64, 62, 61, 56, 51+50. We didn't have to worry about dinner since we stopped in Salinas for supplies and great chili verde burritos at Rosita's Armory Cafe. Next time, we'll stop at the Revancha Cafe in the Mexican district off Main St. 7-8 pm I showed Jeff around the Res. and we called over to see Mark Reynolds + Shorty on the Robertson Place.





P.A. Kelly  
1988

## Journal

Thurs.  
Mar. 10  
(cont.) 2145 p.s.t. Jeff + I headed out to check and close all 12 traps. We caught ♂ 1521-22 and ♀ <sup>1569</sup>~~1547~~ (last.) at H.64; also had ♀ 1465 at H.62 and ♀ 1347<sup>(last.)</sup> at H.61. But the real action was in the ♀ 2250 Matriline. We caught ♀ 1489<sup>(last.)</sup> at H.56, and then we caught her new son (1651-52) at H.51. Jeff started taping while I proceeded to weigh and tag the little guy. I deliberately made him squeal by squeezing his ears a little. His mother ♀ 1489 responded right away and came ant<sup>o</sup> and around H.51 a number of times, tail-rattling. What was even more interesting however, was that 2 other wood rats also tail-rattled in response to the youngster's distress calls. An unidentified rat was tail rattling<sup>(T.R.)</sup> in the willow canopy between H.51 & H.50. Also we could hear<sup>definitely</sup> T.R. coming from inside a trap at H.50. The trapped rat at H.50 turned out to be ♀ 2250 (as expected) the matriarch of the group and the grandmother of juv ♂ 1651. Jeff's sophisticated directional microphone (Sennheiser Shotgun Microphone w. Microphone Amplifier {Minicroff Electronics}) and Sony TCM 5000 EV Cassette Recorder was able to pick up the T.R. of all 3 wood rats as well as the squeals of



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1988

## Journal

Thurs  
Mar. 10  
(cont.)

♂ 1651. The unidentified rat was possibly  
♂ 1284 from H. 47, he is also the probable  
father of ♂ 1651.

We then tried to do some playbacks  
(before returning ♂ 1651 to H. 51). The first  
playback of the juv's squeals, <sup>on Jeff's Tape Deck</sup> resulted in  
♀ 1489 coming out of H. 51 again. But some  
repeated playbacks from my smaller Sanyo  
Tape Deck (placed in ~~the~~ an entrance to H. 51) did  
not illicit any response.

We packed up at 2245 P.S.T. pretty pleased  
with our evening's work.

Fri.  
Mar. 11.

0620 Got up, had breakfast loaded the  
truck and we headed off to Chew's Ridge.  
Jeff brought 3 decoy birds along in the  
hope of collecting some cross bills. He  
collected one ♂ purple finch around 0800.

~~Workin~~ We set up in a secluded grove of  
Pines (sp.?) and Oaks on the N.W. side  
of ~~the~~ Tassajara Rd (Gate was unlocked)  
opposite the Chew's Ridge Lookout Station.  
We hiked around the area, no sign of  
any rat houses - even up by the lookout  
station (undergrowth has been burned). Saw

Bluebirds, Titmice, Flickers, Acorn Woodpeckers,  
(lge Granary in A. lobata), Juncos, Hairy Woodpeckers,  
W.B. Nuthatch, Pygmy Nuthatch, <sup>Calif?</sup> Quail, R.S. Towhee,  
Both Jays,



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1986

## Journal

Mar. 11  
(cont.)

1630 PST We set traps for specific woodrats at 21 houses from H. 26 - 98.

2230 PST Went out w. Jeff to check + close all traps. We caught 17 woodrats but few juveniles so we only got 2 recordings of squeaking (at H. 32 + H. 96). I tagged 2 new individuals at H. 92 (Sub. ad ♀ 1655-56, 205g) and at H. 94 (Imm. ♂ 1657-58, 171g). Where did these 2 come from? I doubt that either is an immigrant. Must check the lactation records for Dec. + early Feb. I also had a new juv ♀ 1653-54 (95g) at H. 32 - Mom ♀ 1256? Got to bed around midnight.

Sat. Mar. 12

After breakfast, Jeff + I drove up the Arnold. He made some recordings of Plain Titmice + Orange-crowned Warblers. Headed back to Berkeley after lunch.

### Hastings Nat. Hist. Res., Carmel Valley, Monterey County, California

4 mi.  
Mar. 25

10.30 PST. Left Berkeley. Stopped at the Crossroads Shopping Mall (Carmel) for supplies. Arr. in Hastings 1400 PST.

Fairly tired after the drive down so I only set traps at 10 houses (from 100C to 126).

2209 PST at H. 110 captured ♀ 1455-56 in one trap the other trap was still open. Found dead juv ♀ (43 g, untagged) on ground within a foot of H. 110.



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1988

## Journal

Mar. 25  
(cont.)

It was still warm and there was a drop of ~~fresh~~ fresh blood between the ears, under the left ear, and behind the left shoulder. It doesn't look as if she got whacked by the trap door. Left body on top of the wooden trap shelter. When I released ♀1455-56 (the presumptive mother) on top of the shelter, she walked around the top a few times - looking for a way off - but she momentarily smelled at the body of the juv. before returning to H. 110.

2319 P.S.T. Hastings Lab. Did an autopsy on the body of the juv. ♀. She was killed by a series of bites to the head, neck, shoulders and chest. The pattern of skin punctures is consistent with infanticide by a conspecific. There's a large hole in the left side of the cranium; there's another significant wound in the chest cavity just under the left humerus. Another bite mark on the back of the neck between the shoulder blades and under the left ear. lots<sup>(12-15)</sup> of smaller skin punctures on the back + shoulders. I prepared a flat study skin so that the wound sites would be more obvious (Cat# P.K.177). I am also keeping the complete skeleton and tissues from the liver, heart + kidneys.





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## Journal

Sat. 1801 PST Found a large owl pellet (Cat #  
Mar. 26 P.K. 178) along the Noyce Prop. fence between  
the "Y" and the Pump. It contains woodrat  
and insect remains  $\Rightarrow$  Barn Owl pellet??  
It was on the ground about 50' SW. of the  
2nd Electricity supply pole from the "Y."

I had spent most of the day working  
on a database program at the Red Hse. In  
the late afternoon I set traps at 30  
active or potentially active houses from  
H. 47 to H. 98 inclusive.

I also examined and photographed  
an incredible moth I caught under the  
Red House porch light when I was coming  
in last night. It had a wingspan of  
about 5", rusty-colored "furry" wings w.  
2 white crescent-shaped blazes and 1  
apical eyespot on each ~~face~~ side. It  
(from Calif. Insects, Powell + Hogue)  
turned out to be a Ceanothus Silk Moth  
Hyalophora euryalus. It looks very  
similar to the Cecropia Moth H. cecropia  
of eastern N. America (Peterson Field Guide  
to the Insects, Borror + White, 1970). It was  
a ♀, since it deposited short strings of  
of hard, encapsulated, tan + white-colored, oval  
shaped eggs on the sides the cardboard  
oatmeal container. The eggs measured  
about 1.5 mm x 2.5 mm. Released her on



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## Journal

Mar 26 the porch again around 2000 PST. She  
(cont.) fluttered to the floor first but was gone  
when I checked again about 30 mins.  
later. Since H. euryalus is supposed to  
feed on Ceanothus, Coffeeberry (Rhamnus)  
and Willow, I think I will try to hatch  
out my 33 eggs on cuttings of same or  
else I might try to stick them to a  
convenient food plant.

Sun.  
Mar. 27 0530 P.S.T. Started checking traps. ♀1150  
was a little shaky on her feet when I  
released her at H.98 but she didn't seem  
hypothermic. Hungry ??? I picked up a  
new subad. ♀ (1659-60, 168g) at previously-  
unoccupied H.76. She had small wounds  
(bite marks) on her rump and tail,  
and she also had 18 nymphal Ticks on  
her R. Ear and 5 on her left. Where has  
she come from? I've no idea until I check  
all the <sup>last</sup> records against her projected age.

0648 PST : H.69, ♂ 1382-1523 in bad shape.  
Complete left fore limb seems to be  
atrophied. There are some yellowish  
scabs on it. It may have been broken. It's  
rigid and apparently useless. He seems  
scrotal, but the testes are medium in  
size and the cauda epididymis are not  
enlarged w. sperm. Smells a little too. He



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1988

## Journal

Mar. 27  
(cont.)

hobbled away on 3 legs when I released him at H. 69.

0659 PST: H. 136, ♀ 1591-92 lost even though only a 183g subad.

0704 PST: H. 62, ♀ 1465-66 lost 4" tail skin in the trap door. Decided to keep the skin as a tissue sample. May be useful for DNA extraction. Actually, I could have been collecting those lost tail-skins for tissue all along.

In the afternoon I walked up Haystack beneath the powerline in search of more owl pellets. No such luck, however I did find a med.-sized Gopher snake near the top. I then set traps from the Y to House 41. I actually captured ♂ 1607-09 at H. 11 by 1830 PST..

I captured a lact. ♀ rat in the attic of the Red Hse but I let her go without tagging her. Went to bed early but I woke to the sound of running rats + tail rattling over my head at 0100 PST. Got up at 0430 and headed down the long field. It was quite cold (30°F) by comparison with the past few nights.

Mon.  
Mar. 28

0518 PST.: H. 25, Caught ♀ 1182-83 in the same trap with a juv. ♂ (1663-64, 81g) and there was another juv ♂ (1665-66, 79g) in the other trap.



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## Journal

Mar. 28  
(cont.)

Since H.25 is fairly rundown I believed that all 3 rats came to H.25 from either H.26 or arboreal H.25A. Since it was quite bright (c. 0545 PST.) when I finished tagging, weighing + examining everybody, I was therefore reluctant to release the juvs on their own. I placed all 3 in the same trap, both ♂♂ attached onto a nipple (despite being 'moulted' by ♀1182) after a few mins.. I opened the door, ♀1182 exited and entered the base of H.25 with the 2 juvs dragging along behind - still attached to her nipples. Here was yet to come; the "woodrat caravan" exited from the far side of H.25 climbed an elder bush and crossed to arb. H.25A. I was expecting one or other of the 2 ♂♂ to fall off but ♀1182 just climbed across the 15' of intervening branches and dragged the 160 g of offspring (74.4% of her own body <sup>(215g)</sup> weight) behind her. I've read that woodrats could do this and I've seen smaller scale examples but nothing as impressive as this.

0548 PST: H.16 captured ♀1519-20. ~~at~~ She gave birth to 3 offspring during the night. Unfortunately, she had no bedding and all 3 were close to death. ♀1519 also looked





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1988

## Journal

Mar. 28

(cont.)

pretty shook up. I took them all to the lab immediately. After a few minutes in my warm hands all 3 neonates began to revive and started squeaking. I prepared a standard (large-size) lab. holding cage for them: supplied with cotton bedding, wood shavings, cleaned corn, oak leaves and a ~~fresh~~ water bottle. I couldn't sex them but they weighed 13.4 g, 12.9 g and 12.8 g. I bet the sexes are ♂, ♀ and ♀ respectively. ♀ 1519-20 weighed 236 g and seemed stressed out. So I covered the cage and put it in a dark room for the day.

0655 PST.: In the Spider Tree, I caught a new juv. ♂ (1667-68, 95 g) beside ♀ 2269 (his mom?) <sup>up</sup> under H.6. He was fairly hyper and squealed a lot. I released both of them together into the wooden trap shelter in the canopy under H.6. ♀ 2269 left immediately and ascended up into H.6. The ♂ was much more hesitant and cautious. He stayed back in the shelter at first and, when he came out and stood on a branch, he seemed very "unsure of himself". Then ♀ 2269 tail rattled from inside of H.6, he responded instantly and climbed quickly up and into H.6.



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1988

## Journal

Mar. 28 ♀ 1460 did not return to H.5, where she  
(cont.) was captured. Instead she headed  
across through the canopy to H.6. She  
didn't go into it immediately, but  
actually foraged close to it. She  
eventually entered H.6, albeit caut-  
iously. A min. or two later I could hear  
a minor commotion - chase?, no squeaks  
- but no woodrats excited the House.

0800 PST: Red Hse. I was irascible after  
the morning's work. Demolished a large  
breakfast of Huevos Rancheros.

1100 - 1230 PST: Collected fecal samples  
from the trap shelters (usually 30  
pellets per shelter) that had rats <sup>(+ pellets)</sup> over  
the last 2 nights (110 to 25). 22 samples  
in all from Houses 25, 32, 34, 41, <sup>47</sup>50, 56, 61, 62, 69,  
71, 76, 82, 85, 90, 91, 91A, 92, 96, 97, 98, & 100C.

1600 - 1900 PST. Setting traps, clearing Poison  
Oak + other jobs. Also collected more fecal  
samples from Hses 1, 5, 6, 7, 16 and at 11 when  
I captured ♂ 1607-09 at 1916 PST. He had 10 pellets  
by then even though he couldn't have been in the  
trap any longer than an hour.

1802 PST: lot of acorn husks in front of  
dilapidated H.120. They are coming from the  
hole in Red Willow overhead. Also see a lot of them  
at other houses. I must test the importance



P.A. Kelly

1988

Journal

Mar. 28 of acorns by clearing middens and monitoring  
(cont.) build up of more lunks. I should also  
dismantle some houses on the Arnold to  
assess magnitude of acorn stores.

1931 PST.: At lab ♀1519-20 seems to be  
suckling all 3 young now. She's very  
quiet, hunched w. head down in bed but  
her heartbeat looks fast. She has eaten  
many of the 10 acorns I gave her this  
morning, so I gave her 10 more. I also  
gave her 2 leaves of lettuce, a med-  
sized carrot. She still has H<sub>2</sub>O, a dish of  
cleaned corn and some live Oak leaves.

2319 PST.: ♀1519-20 still suckling all 3  
young. Seems very quiet.

Tues. 0016 PST.: At H. 103A captured two juv.  
Mar. 29 females (1671-72, 53g; 1673-74, 58g). I caught  
their mom (♀1453-54) at H. 102 (with ♂1173-74)  
about 30 mins earlier. She came over to  
H. 103A and responded with tail-rattling  
from in and around 103A to their protest  
squeaks. She stuck her head out of 103A  
and watched me, I could also hear T.R.  
from H. 102 (♂1173?). Put the 2 juvs in the  
same trap and reset the other one for Mon.  
She didn't go into the trap though by 0103 PST.  
so I released both young - They entered  
H. 103A. Slept in back of the truck until 0530 PST.



A.A. Kelly  
1998

## Journal

Mar. 29 547 p.s.t.: H. 132 capt. a <sup>177g</sup> ♀ but forgot to  
(cont.) read her tags. Still groggy after only  
4 hours sleep. Will retrap soon.

657 p.s.t.: H. 120 capt. "Dasyurus" (♂) 1531-32,  
298 g) the "spotted rat". Seems a bit  
shook up. His r. tag is loose (slit in ear,  
bite); bare patch around front of left  
ear - scab at base of ear; also has an  
open wound high on l. flank - like an  
old warble wound, albeit festered.

740 p.s.t.: Picked up a collection of about  
811 Bobcat scats between H. 107 + H. 108.  
Also noticed extensive bark-peeling in  
willow over H. 107. Must trap soon. Reactivated.

827 p.s.t.: At lab ♀ 1519-20 suckling all  
3 youngsters. Didn't give her any more food.

900 p.s.t.: Back to the Red Hse for a  
big breakfast. After breakfast I  
got some tools together (machetes,  
small rake fork, brush slash hook),  
measuring tapes, plastic bags and  
flagging tape. Headed up the Arnold  
(brought a packed lunch) to open up  
some rat houses to identify and  
quantify food stores. I intended  
concentrating on houses that were  
close to the road.





P.A. Kelly  
1988

## Journal

Mar. 29 Houses on the Arnold Rd at Hastings

(cont.) A.1 60 cm High x 110 cm Base Diameter

(1045 PST) Grove of Q. agrifolia + Madrone  
diversiloba <sup>Toyon, Coffeeberry</sup> as a sparse understory

Has 2 active basal entrances.

House composed of dead twigs + sticks.  
No cuttings but some R. diversiloba  
is growing through the house. House  
supported on one side by a small  
live oak [circum at breast height is  
48 cm  $\Rightarrow$  D.B.H. = 15.3 cm]. No  
fresh acorn husks or midden mound  
outside of house.

20 cm Diameter nest on ground in  
center of house. No rat(s) emerged.  
Nest composed of dry grass +  
lichen. A few small cuttings of  
live Oak, 1 lge leaf of Toyon. No  
acorns or food store chambers  
found. Number of underground  
tunnels - some 30 cm deep. Didn't  
(1117 PST) follow them out completely. No  
other rat house in sight.

A.2 62 cm H. x c. 150 cm B.D. In pile of  
(1132 PST) discarded brush in Baccares beside  
some lge live Oaks. Old nest, no  
food stores.



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## Journal

Mar 29

(cont.) A.3: c. 80 cm H. x c. 170 cm B.D. Surrounded by live + Black Oaks, Madrone, Coffeeberry + Poison Oak. Didn't see any rats. No uneaten acorns, lot of husks though. Got a big bag of green dried leaves: lot of Black Oak and Madrone flowers?

A.4 : In West Ravine. 120 cm H. x c. 120 cm B.D.  
(1413 psr) lge Hidden Mounds with a lot of acorn husks. In h. Oak Woodland w. Coffeeberry and Poison Oak through house. Also Valley Oak <sup>(Blue Oak)</sup> within a home range of the Hzc. (say 50 m. radius). Got a bunch of <sup>(c. 1 psr.)</sup> <sup>(Blue Oak)</sup> acorns, and more green plant material (live + Blue Oak, Madrone, Red Berry, Old Toyon Berries).

1504 psr : lab. ♀ 1519 still doing fine. Went to Red Hzc and slept for c. 1/2 hours. Then went out and set traps at all active houses between 79 and 98 (inclusive). Want to dust all ♂♂ (3 or 4) with fluorescent pigments and identify social contacts.

1923 psr.: Caught ♂ 1192 at H. 92 - Dusted Orange. Not much happening due to a bright waxing moon. Captured another subad



P.A. Kelly  
1988

## Journal

Mar 29 (♂ 1691, 134g) in the Red Hse attic. I am  
(cont.) keeping him along w. his sib (♀ 1669)  
for DNA extractions. I also intend to  
use their mother (♀ 1670) and the litter  
she is currently suckling. Bed by 2330.

Wed.

Mar 30 0300 Got up to continue fluorescent pigment  
tracking.

0318 PST: Just saw a large pig on the  
lane near H. 134. His <sup>(♂?)</sup> skin was blotched  
w. Grey, (Dermatitis?) and he walked  
right up to the front of the truck  
apparently dazzled and disoriented  
by the headlights before turning  
up <sup>into the brush on</sup> School Hill. He looked in good  
condition despite the grey blotches.  
Too bad Kucera needed his <sup>30-06</sup> rifle this  
week for a deer take in the Owens Valley.

344 PST: New juv. ♀ (1694-95, 61g) at H. 91A.  
I also had 2 new juvs (♂ 1689-90, 129g; ♀ 1692-93,  
129g) earlier at H. 127.

353 PST: Dusted ♂ 1336-1660 green at H. 85.

471 PST: Sitting in truck at lane. Can  
hear a lot of T.R. coming from "80's + 90's".

505 PST: Getting bright. Closed all traps.  
Went back to Red Hse and slept until 0900.  
Updated notes. Made a study skin of the P. boylii  
killed in the trap at H. 82 last night (Cat # P.K. 179)  
Repaired both handling bags.



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## Journal

Mar. 30 (cont.) 1700 PST. : My cousin Joe Aspell arrived in Hastings from Cupertino. He helped me set traps at 5 previously-untrapped houses south of the 1st crossing. Will map them one of the days. We also set 6 pairs of traps under the live Oaks between Griffins' and the creek bed. Looked in on ♀ 15+19+20, all 4 are doing fine. Had a great spaghetti dinner with Joe at the Red Hse. We split a pint bottle of Newcastle Brown Ale. Who needs red wine with Italian food. None of that American Bud-piss either.

1706 PST. : I saw a young rat (didn't see any tag) leave H.207 and climb up in the Coffeeberry + live Oak overhead. Set a pair of traps for it.

2206 PST. : Joe and I started surveying houses 79-98 for pigment and we opened the traps there as well (same as last night except for H.81. Found Green pig. (from ♂ 1336) on <sup>the house 79</sup> and on a runway to it.

2208 PST. : No pig. at H.81. Didn't trap.

2210 PST. : Same green pig. and some orange pig. (I think it was 82 PK) (poss. old from ♂ 1289-71 on Nov. 14, 1987) on upcreek side of hse (4 patches green, 2/3 orange).

2215 PST. : H.85 lot of Green from ♂ 1336's release

2217 PST. : H.87 no pigment of either color.





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## Journal

- Mar. 30 2220 pST : H. 88 no pigment. Set 2 traps  
(cont.) 2220 pST : H. 90 " " " " "  
2227 pST : H 91A-91. Orange pig. <sup>(07/11/92)</sup> in base of  
H. 91A and extending <sup>practically</sup> all the way to H. 91,  
through branches + runways. On nettles,  
branches etc at 91. Some of the marks  
are isolated and may in fact be  
belly rubs - scent marks. No green.  
2231 pST : H 92, orange pig. at last night's  
release site and extending downcreek,  
through brush towards H. 94.  
2234 pST : Can see orange pig specks on  
nettles between 92 & 94. Can see more  
pig. about 9' up in willows overhead.  
Must have been T.R. overhead and rained  
some pig. down on the veg. below.  
2236 pST : Orange pig in brush (terrestrially)  
between 92 & 94, and he entered H. 94 near  
its apex.  
2239 pST : Extensive orange pig. trail  
extending from the back (S. side) of  
H. 94 along an inclined Willow trunk.  
It looks like he was tail-rattling along  
the trunk. Can see the apparent outline  
in orange pigment of 3 tail-base marks.  
2241 pST : <sup>96</sup> No pigment of either color.  
2244 pST : <sup>97</sup> " " " " "  
2246 pST : <sup>98</sup> " " " " "



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Journal.

- Thurs Mar 31 408 PST: H. 98 no woodrat, although I can hear one (♀ 1150?) T.R. inside. I saw an ad. rat T.R. and watching me from H. 98 as I worked at H. 97 a few mins later. A little orange fig. (small amount) on veg. and on a branch close to the creek-side entrance to H. 98 I may have missed this last night. So ♂ 1192 has been active at least from H. 91 to H. 98 since 1923 PST on 3/29/88.
- 409 PST: Caught <sup>juv.</sup> ♀ 1692-93 at H. 97 - No fig.
- 415 PST: Watching ♀ 1150 (?) at H. 98.
- 419 PST: Orange fig on leaves on top of tent shelter at H. 91A. Also fig. on shelter.
- 430 PST: <sup>H. 91,</sup> ♀ 1525-26 has orange fig on both cheeks and on both ears. None anywhere else though. ♀ 1655-56 has no detectable pigment anywhere. Lot of T.R. coming from around H. 89. Probably ♀ 1525-26 after her release.
- 439 PST: H. 90, no rats but a little green fig. on ground beside the house.
- 442 PST: H. 88, ♂ 1336 still covered in green fig. → H. 88 upon release w. T.R.
- 443 PST: H. 87, no rats, no fig.
- 446 PST: H. 85, ♀ 1491-92 has Green fig. all over (nose, chin, ears, shoulders, face, forepaws, claws (esp. hindfoot), tail).



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## Journal

Mar. 31 454 PST: H.82 + H.79, No rats or <sup>more</sup> pigment.  
(cont.) 515 PST: Back to bed at Red Hze and  
slept until 0730. Then got hold of  
Joe and we checked on the <sup>10</sup> traps  
below the 1st crossing (Hzes 229, 230,  
231, 232, 233); H.207; H.100A; and the  
6 pairs set outside Jim Griffin's (Y26,  
Y27, Ynew, Y29, Y30 and Y32. We didn't  
catch any tagged rats, but caught  
5 new ♂♂ and 3 new ♀♀ (See trapping  
record for details).

Jim Griffin went over the contents of  
the food store. I collected from 3 rat  
houses on the Arnold. Jim thought the  
acorns from A.4 were Blue Oak.

Set traps from 79 to 98. Still looking  
for fluorescent pigment from ♂1192 and  
♂1336. I also wanted to do some diadic  
encounters. The moon is practically  
full though so trap success may be low.

2040 PST: H.85, ♀1491-92 has a lot of green  
pig. in the same places as she had it  
last night (ie all over); New juv. ♀ (1712-  
13, 66g) also has a lot of green pig (tail,  
feet, ears, face, left flank). Did ♀1712-13  
get the green pig from ♂1336, ♀1491 or  
from contact with passages in H.85.



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## Journal

Mar. 31 2101 PST: H. 94, caught ♀ 1150, up from  
(cont) H. 98. Why? Visiting ♂ 1192? She has  
Orange pig. from ♂ 1192 on her tail,  
claws, on fur, ears. Not very dense  
pigmentation. She might have got it  
last night.

2108 PST: H. 96, ♀ 1605-06 has Orange pig  
around her ears, along her tail, on  
her rump, hind feet. Took her to the  
lab to do a vaginal lavage - looking  
for sperm from ♂ 1192. Didn't find any.

Didn't capture ♂ 1192 and didn't do  
any diadic encounters. Finished up  
by 23.30 PST.

Thurs.  
Apr. 1

Returned to Berkeley in the afternoon.  
Itching and puffy-eyed from poison  
oak contact. Brought the 2 young rats  
from the Red Haze attic (♀ 1669 + ♂ 1691) and another  
♀ I just got from Tifer Griffin (his attic) to Berkeley.

N.B.

Sun.  
Apr. 3

Daylight Savings Time begins today. I  
must watch out for mistakes in recording  
the time (Using Military Standard Time only) on  
my next trip to Hastings.





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## Journal

Tues. Hastings Natural History Reservation, Carmel Valley  
Apr. 12 Monterey Co., California.

Left Berkeley at ~~1~~ 1 p.m., arr Hastings,  
after a detour to Monterey for supplies, at 5 p.m.  
(ie 1600 PST.).

1805 PST.: Started setting traps in the  
80's + 90's. I am picking up a lot of ticks  
off the veg. - some fleas too. I should  
get some of these ticks tested for Lyme  
Disease. Now a problem in N. California.

Found a new small house in the  
brambles about 15' downcreek from H. 90.  
Both houses are linked by trails through  
the grass - prob. still occupied by ♂ 1505.

2110 PST: Weighed ♀ 1519 - 20's 3 youngsters  
in the lab. - 29g, 29g + 32g. There are now  
15 days old, and all have their eyes open -  
especially the largest one. I still cannot see  
them for sure. They all look the same -  
possibly all ♀. Gave all 3 a left ear tag  
to match the previous tag (1714<sup>29g</sup>-17, 1715<sup>29g</sup>-18, 1716<sup>32g</sup>-19)

2124 PST: H. 11, captured ♂ 1607-09. Want to  
dust him with pig. to see if he will transfer  
it to ♀ 1519 and her 3 young. He escaped  
but I capt. him again at 2328 + dusted him  
with Red pigment. I also trapped H. 16  
(♀ 1519's house) but nothing had moved in.  
Will release all 4 tomorrow evening.



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Apr. 12 2231 PST: H.79, ♂ 1336. Dusted him again  
(cont.) with green pigment.

2254: H.69, ♂ 1382-1523. His right foreleg  
has healed up quite a bit. He also has  
put on 26g (now 282g.) since March 27 and  
he ran away towards H.69 upon release.

Wed.

Apr. 13

0619: H.90. Not having much success  
trying to capture rats at Houses 91A, 90,  
92, + 87. Will use some peanut butter  
tonight. I'm after ♂ 1192, ♂ 1505 + others.

N.B.

0632: Watched a mountain lion ascend  
the Haystack Hill path. Noticed him/her  
as I drove back up the lane between Long  
Field + Gate Field. At first I thought it  
was a lone deer but then it "disappeared  
from view. I took my 8x42 Bushnell  
Banner binoculars and craned awkwardly  
out the window and looked up  
towards Haystack. My heart skipped  
a beat when I noticed the dark tip  
of a long tail projecting above the  
grass as the animal ascended the  
path. "That's a mountain lion" I told  
myself and I couldn't believe that  
I was finally watching one especially  
out in the open like that. I got out of  
the truck, turned on the tape recorder,



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## Journal

Apr. 13 bemoaned the fact that I didn't have  
(cont.) a spotting scope or a telephoto lens with  
me, and continued observing. He looked  
back towards me about 10 secs after  
I got out of the truck. He continued  
on up the hill, "staying on the path  
all the way, nose to the ground."

0633 PST: He crossed under the fence  
between the 2nd + 3rd power pole (near a  
smaller telephone-line pole) onto the "Hayce"  
ranch. I got a good clear look as he  
crossed open over-grazed hillside  
towards the Buckeye Woods: "long tail,  
dark tip, he's not very big, I wonder  
if he is a cub or yearling, walking  
across open ground on Hayce property,  
see him clearly, shoulders a little  
lower than rump, going into trees,  
out of sight."

0652 PST: Went through the Buckeye  
Woods on Haystack with a spotting scope  
and camera but didn't get another  
sighting.

In retrospect, I should mention  
that at around 0620 PST I saw 2 pair  
of deer in the long field (near H. 100). They  
did not pay much attention to me. All  
of them spent a lot of time looking



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## Journal

Apr 13 towards Haystack Hill. — although where  
(cont) I actually saw the lion would have been  
out of their line of vision. I scanned  
Haystack at the time however, but all  
I saw was a lone deer in the Valley Oaks  
on N. side of Pearson field. Were  
they responding to the lion or not?

1349 PST: Blom Pond, found 2 reasonable  
+ 2 faint lion pugmarks at the West  
end of the pond. I was following up  
a suggestion by Shorty, that the lion  
might have been returning to Haystack  
after taking a drink at the pond. The  
two best tracks measure <sup>(wide)</sup> 80 mm x <sup>(long)</sup> 70 mm  
approximately. There are also a lot of  
fresh pig tracks around the pond,  
and at least one pond turtle apparently  
survived the bulldozer (or else immigrated  
since the pond was deepened).

1640 PST: Released ♀ 1519 and her 3 attached  
young at an entrance to H. 16. She smelled  
around for a moment and then rushed  
straight into the house. I also put  
a bunch of her nesting material and  
the remaining 10 or 12 acorns in an  
entrance also in case she needs dry  
+ familiar-melling bedding. It has  
been raining lightly off and on since





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## Journal

Apr. 13 last night but I doubt that H.16 could  
(cont.) be damp already. Anyway, she has been  
out of circulation long enough, time to  
return her to her home.

I set a large carnivore trap baited w.  
a can of cat food for the larger ginger  
house cat I saw on the lane (and on the  
hood of my truck) last night.

2137: H.91, caught ♂ 1192 (302g) dusted him  
again with orange pig. New juv ♀ (1722-23, 109g)  
in other trap - mother? ♀ 1655 & 1525).

2200: Tagged Rat watching me from holes  
in Red Willow at H.89. I should try to get  
hold of some color-coded tags for these  
sorts of observations (like the ones Janet  
Randell S.F. State is using in her K Rat study).

2203: Found a 7" Ambystoma tigrinum  
in creek bed by H.82. Feisty and in good  
condition. Very pretty. Left alone.

2242: Found a 3" Aneides <sup>at H.62</sup> also saw  
another one <sup>(4")</sup> later on at H.50.

Thurs.  
Apr. 14

0017: H.90. Finally captured ♂ 1505-06.  
He's huge (360g) but he doesn't seem to  
be reproductively active. Dusted w. Red pigment.  
I caught a lot of rats between H.25 + H.98  
(except from H.66A to H.71).

0027: Pair of Barn Owls flying and vocalizing  
in tandem over Pearson Field + Long Field.



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## Journal

Apr. 14 (cont.) Rained heavily in the morning and remained overcast with occasional showers throughout the day.

1156 PST: Blom Pond, no more tracks from the mountain lion and yesterday's tracks have faded because of this morning's rain.

The pond turtle was up on the steep bank on the west side of the pond. It plopped into the pond as I approached.

1430: Liam Walsh, my old classmate from U.C.G. Ireland, visited the Reservation with another Irish friend. I showed them around and introduced them to a few captive rats in the lower barn.

1800-1900: Set traps from H. 76-97 and from H. 100C to the 2nd Crossing. I set a pair of traps at a previously unnoticed house (designated 106A) in the roots of 2 large Live Oaks beside a big triangular-shaped rock along the creek opposite H. 106. One of Lois Greene's markers (# 2211) also marks the spot. I also set a pair at H. 127A for the 2nd time.

2130: Started checking traps. It's been raining for the past few hours but all rats will be safe + cozy in the shelters. Trap success was very low overall. So much for the pigment-tracking program I hoped to accomplish over this new moon (Sat.) period. I did have a few interesting



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## Journal

Apr. 14 captures however:

(cont) 2225: H. 106A, caught ♀ 1671-72 (81g). She was first captured at H. 103A, weighing 53g, on 3/29.

2234: H. 116, ♂ 1675-76 (231g). Not scrotal, had 2 large (c.  $\frac{1}{2}$ " long) wounds on r. side of rump, plus some fur damage on back + sides. He was first (+ last) captured at H. 127A on March 29th, weighed 213g then. Also had no warbles then, although he now has 2 med-sized ones on his throat.

2246: H. 127A, ♂ 1527-28 (271g), <sup>scrotal</sup>, good condition. First (+ last) captured at H. 109 on Nov. 1st 1987 weighing 213g then. Has put on 58g in the past  $5\frac{1}{2}$  mths. He is also 40g heavier than ♂ 1675-76, who was at this same house on March 29th. I wonder if he is responsible for ♂ 1675's rump wounds?

Closed the feral cat trap and got to bed around 2330.

<sup>7eri.</sup>  
Apr. 15 0931 PST: Blom Pond, no fresh tracks.

1000 - 1200: Tissued the 2 young woodrats (♀ 1669 & ♂ 1691) from the Red. Hse attic. I will make study skins later on this evening (Cat. #s 180 and 181). They are in good shape despite the fact that they both lost 10-20g (in captivity since March 28th and 29th). I decided to cook the postcranial skeleton of both of them. They were pretty tasteless. Never again.



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Journal

Apr. 15 1300 PST: Finally decided to do something (cont.) with the ♀ woodrat Jim Griffin captured in his attic on April 1st (in captivity since). I think I will hold her for feeding experiments. She weighed 160g, I bet she was heavier on April 1st. Perf. but not lactating. Was lactating on April 1st. I put her in a large holding cage (27 ft<sup>3</sup>) in the lower barn with 80g Valley Oak Stems + leaves, 50g of Cleaned Corn, and 6 large Q. lobata acorns. Tagged her right ear only (# 1730).

1530 PST: Started setting traps. Set 66 in all from H. 1 to H. 209. Found 3 more bobcat scats between H. 107 + H. 109 - too wet <sup>(rain)</sup> to pick up yet.

1636 PST: Large cock turkey in stand of oaks on East face of Haystack Hill. Walked downhill then flew across Long Field to Sch. Hill.

1700 PST: Flock of 40-50 Band-tailed Pigeons circling over Long Field, Pearson Field + Blom Pond. Landing periodically in Valley Oaks.

1912 PST: Great Horned Owl calling from around Blom Knoll. Didn't respond to my calls.

1930 PST: Put up study skins of 2 young rats (PK 180 + 181) in the lab.

2145 PST: Started checking traps at H. 134. Saw a Ginger feral cat around there. Moved the





P.A. Kelly  
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## Journal

Apr. 15 large Tomahawk from the Y to the lane at  
(cont.) H. 123 to capture him. Heavy continuous  
drizzle falling.

2214 PST: H. 201A caught ♀ 1536-37 (255g). I  
last captured her at 119A + 120 in November.

2221 PST: H. 123, got new ♀ (1731-32, 213g).

2242 PST: H. 103A, caught ♀ 1453-54 (235g). She's  
lactating heavily - young litter. Can hear  
tail rattling in 103A (♂?). She has some  
milky liquid in the vagina. Sperm from  
♂ 1173? I didn't have my smear kit with me.

2302 PST: H. 138, large Western Toad in trap.

2320 PST: H. 6, new juv. ♂ (1733-34, 138g) with  
♀ 2269. Has large warble on his chest.

I also captured ♀ 1670 and a new juv.  
♂ ~~at~~ in the Red Hse attic. Will tissue tomorrow.  
There may be another juv. or two there as well.  
Got to bed around 2400 PST (ie 1 a.m.).

Sat.  
Apr. 16

0814 PST: Nothing in carnivore trap on  
lane. Still raining. Will leave open all  
day. Tissued the pair of rats from the  
Red Hse attic (Cat #s PK. 182 and 183).

1353 PST: Blom Pond - no fresh tracks.

1815 PST: Jim Griffin gave me a young ♂  
woodrat that he snap-trapped in his home.  
I bet it is the son of ♀ 1730 which he  
trapped in his attic on April 1st. He



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Apr. 16 has been in the trap for a few days, so I  
(cont.) decided to ~~only~~ make a comp. skeleton  
(Cat # 184).

1715 PST. Started setting traps from H. 1 to 32  
and H. 76 to 98.

2100 PST

Made a study skin and took tissues from  
the last juv. woodrat I captured in the Red  
House attic (Cat # 185).

2219 PST Started checking traps. Still  
raining continuously, so used the  
minicassette recorder instead of the clipboard.

Sun.

Apr. 17

831 PST Found a lot of fresh pig tracks  
on Martin Rd.  
just north of the turn off for the Robertson  
Place. I also found a lot of large fresh  
lion tracks interspersed among the  
pig tracks. Not very deep, but measure  
over 90 mm wide and over 80 mm in  
length. The plantar pad on the best  
track I could find was 60 mm wide  
and about 50 mm in length. Along with  
the many deer and lion tracks along  
Martin Rd., there were also dog, deer and  
bobcat tracks as well.

930 PST. I released ♀ 1730 in the lower  
Baern (Capt. in Griffins). Collected 88



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## Journal

Apr. 17 fecal pellets from under her large  
(cont.) holding cage. She has been feeding on  
Valley Oak and Cleaned Corn.  
1000 PST. Headed back to Berkeley.

Tues. Hastings Nat. Hist. Reservation, Carmel Valley  
May 10 Monterey Co., California

Drove to Hastings, arr. c. 1400 PST. Hot and  
sunny all afternoon. Met Nancy Pophis and  
her parents at the Red Hse. Stanback was  
there too of course.

1715 PST Shooked a Saw-whet Owl from  
Ground level at H.79 (while setting traps).  
Flew up into <sup>Buckeye</sup> ~~oak~~ over the creekbed. "Brown  
head, yellow eyes, orange breast (= juvenile),  
barred tail, white between and above eyes" (on tape). Watched me intently.  
Made clicking noises with bill. Didn't have  
a bird or other prey. A scrub jay flew  
up and landed beside it but didn't  
start calling or mobbing.

Went to bed early.

Wed. 0400 PST: Started checking traps. Trapping  
May 11 success was very high. Dawn chorus  
also impressive.

1314: Found remains of a <sup>recent</sup> lion kill  
in the creek at H.28. Adult does, all bones  
are picked clean but the skeleton is not



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## Journal

disarticulated. Mark Stanbach told me he has seen a lion in this area (Long Field + Lane) no less than three times over the past few weeks. On one of those occasions, he actually heard a deer scream in the afternoon and investigated to find the lion running away from a dying young fawn somewhere around H.87 or H.90. I didn't find any trace of the fawn. He said it's mother was very distressed and paced around on the W. side of the creek watching her offspring (and the lion presumably) in the creek below. I wonder if these 2 kills and the other sightings (Mark's) belong to the same lion I watched on Haystack Hill on April 13th? Or, do they belong to the larger lion that left tracks on Martin Rd. a few days later?

Early evening I set traps from H.11-56.  
Thurs 0400 PST: Again, I had great trap success  
May 12 but I only caught ♀ 1519-20 at H16 - No young.  
Evening: Set traps from H.100C - 127A.  
Fri 0400 PST: lots of rats again, inc. more  
May 13 new ones.  
Headed back to Berkeley by mid-morning.





P.A. Kelly  
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## Journal

Thurs. May 26 Hastings Nat. Hist. Res., Carmel Valley  
Monterey County, California

9am. Left Berkeley with Shellie Kahane, and arr. Hastings c. 1.30 p.m. after stopping off in Salinas for supplies. Showed Shellie around the Reservation and around 3pm (1400 PST) we started setting traps. We set pairs of traps at 37 active houses between H.25 and H.98. We found a small (c. 1" long) owl pellet on top of the trap shelter at H.50. It probably belongs to a Saw-whet owl (saw one at H.79 last time) and contained the remains of a small cricetid (*Reithrodontomys*?). We also found a new house (or rodent den - *Spermophilus* ??) in the base of a Red Willow about 30' up <sup>up</sup> from H.32 - designated it 31A for now.

2030 PST: We started checking traps. Earlier than usual, because of the number of traps and houses involved. Also since it was bright with a rising moon, trap-success would not be so great anyway.

2109 PST: H.82, Tagging new juv. ♀ 1772-73. <sup>(♀1491) watched us (+T.R.)</sup> Squeaking a lot. Her mother and 2 other rats (in brush near H.85) tail-rattled in response as well.

2148 PST: H.62, tagging new juv. ♀ 1774-75. Squealed in protest. Her mother (♀1465-66) actually came out of H.62 and came across a few ft. of open ground to smell ♀ 1774 in Handling Bag. Got to bed early + returned to Berke. in the am.



P.A. Kelly  
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## Journal

Tuolumne Meadows, Yosemite National Park,

Sat.

Tuolumne Co., California (8,600 ft)

May 28

Left Berkeley at 8 a.m., arrived in Yosemite around 11 a.m.. Cathy and I are visiting Les Chow and Peggy Moore at their Big Horn Sheep Reintroduction H.Q. in Bug Camp, Tuolumne Meadows for the <sup>(Memorial)</sup> weekend. Les and Peggy were gone for the day but told us to make ourselves right at home in their large 2 room Tent-frame Cabin in Bug Camp. We did.

In the afternoon we took a short hike south across the Dana + Lyell Forks of the Tuolumne, then west along the Lyell Fork to the Tuolumne Meadows Campground, then <sup>back</sup> east along the Dana to Bug Camp. En route we got our first good luck at a ♂ Mountain Bluebird. We also saw Juncos, Yellow-rumped warblers, Hermit Thrushes, <sup>Stellar Jays</sup>, and some Belding Ground Squirrels. Started raining around 7 p.m. but it was snowing by 9 p.m. Bed by 10 p.m.

Sun.

May 29

Awoke to find a blanket of snow over everything. Beautiful but the storm continued off and on through the day.

Les + Peggy (and their friends Annie + Judy) showed up for breakfast at 9 a.m.. Hwy 120 was closed at both ends. Lot of holiday campers were miserable. The Rangers led convoys



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## Journal

May 29 of campers out of the park. We decided to stay.  
(cont.) In the afternoon, Cathy and I took a nice  
hike to Soda Springs then south through  
the meadow and back along H. 120. The  
snow stopped periodically and the vistas  
were spectacular. There was a lot of bird  
activity around the Springs: - Brewer's  
Black Birds, Yellow-rumped Warblers, Killdeer,  
Flicker, White-crowned Sparrows. The  
Belding's squirrels were spectacular in the  
meadow. They alarm-called at our approach  
as we followed the trail across the meadow.  
They were also very conspicuous as they  
emerged, chased and scampered through  
the snow. They all look around the same  
size. Are these only males? Have the  
females emerged yet? Didn't see any  
predators at all on the meadow, although  
we did find some coyote scat along the  
Dana fork yesterday. Terry <sup>(no relation to Peggy)</sup> Moore (Les +  
Peggy's field assistant) and Glen Fredericks  
(Humboldt St. Grad Student doing a Masters  
on introduced Ptarmigan) joined us for  
dinner (fried chicken w. Garlic + Paprika, potato salad,  
green salad, beer + mulled wine + brownies  
- such deprivation) at Les + Peggy's cabin.  
Stopped snowing by c. 10 p.m. destined to be  
very cold tonight. Cathy + I slept on Les + Peggy's floor.



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## Journal

Mon. May 30 Beautiful cold clear morning. After breakfast we drove over Tioga Pass with Les + Peggy in search of their radio-collared Big Horns. We located a pair of ewes on the south face of Lee Vining Peak. Peggy eventually located them on a Juniper clad bench up over Highway 120. We watched them through binoculars and spotting scope for over half an hour. The group contained 2 ewes, 3 yearlings and 1 lamb. Les + Peggy had hoped for 2 lambs. Peggy continued observing the sheep. We drove back through the park and gave Les a ride to Crane Flat to pick up their out-of-gas pickup truck.

The traffic en route to the Bay Area was not too bad considering the Holiday Weekend. Probably due to the mass exodus on Sat. night / Sun. morning. We arrived in Albany at 5.45 p.m.





P.A. Kelly  
1988

## Journal

Hastings Nat. Hist. Reservation, Carmel Valley,

Sun.

Monterey Co., California.

June 26 Left Berkeley 1pm, arrived Hastings c'4 pm.  
Stopped off en route for supplies (at Salinas).  
Set traps for all females that were lactating  
in the long field between June 13 and June 18.  
I also trapped from the Y to the pump.

Mon.

600-849 PST checked traps. Caught all 8 lact.

June 27

females but only 5 ~~4~~ were still lact (♀1731,  
♀1197, ♀1292, ♀1347, ♀1519). ♀1182 has also given  
birth since June 15th at H.26 - probably inside  
last week given the squeals, <sup>(i.e. type)</sup> of young <sup>in H.26</sup>. I also  
tagged 2 new juvs. ♂♂ (1870-71, 1872-73; both 65g and  
in same trap at H.16. Mom ♀1519 lost the litter of 3  
(1714, 15, 16) I raised in captivity. I also only captured  
the 3 resident females (2269, 1390, 1460) in the  
Spider Tree. What's become of their young of  
the year? The canopy of the Spider Tree has  
thinned somewhat due to the great abundance  
of oak moths this year - predation easier?  
I trapped ♀1188 at arb. hse 1B and she descended  
from H.1B's Valley Oak and ran along the ground  
upon release to H.1. <sup>(045 PST)</sup> 11.45 a.m. <sup>(10 mi N.S. Hwy)</sup> Felt 5.2 Earthquake.

In the afternoon I sacrificed two male  
woodrats (Cat # = 187 and 188) that Mark  
Stanback captured in the Red House attic on  
night and last night respectively.  
Made study skins with partial skeletons and



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## Journal

June 27  
(cont.)

kept liver, heart and kidney for a possible post doctoral project on population genetic structure. The large ♂ (#187) is possibly the sire of ♀1670's two litters (of two) - all five of which I previously sacrificed for tissues, skins and partial skeletons.

Jane Kidd ~~also~~ (Field Assistant, Woodpecker Project) also gave me a juv ♀ (Cat #189, 94g) she found on the lane near the 2nd Crossing (ie between Hses 121 and 205). Had one large warble on its flank but I couldn't find any injuries. The lungs looked as if they had small white bodies/growths (???) however. It was too decomposed to make a study skin or to take tissues.

Ray Callaway? (UC Santa Barbara, Ph.D. on Oak Physiology) <sup>and his dog Take</sup> came up <sup>Madera</sup> Canyon around 7:30pm with me in search of some pigs he heard earlier in the afternoon. We went all the way up as far as the fence but didn't see anything until we were coming back down and Take "pointed" a pair of large black pigs foraging under some oaks over the chaparral-covered ridge NE. of the Hastings Cabin. Ray stayed back with Take and I crawled to within about 100 yds. I waited for one of the pigs to come into the open. When one did I aimed



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1988

## Journal

June 27  
(cont.)

for the upper shoulder (allowing for some drop due to an uphill shot) and fired Tom Kucera's 30-06. The pig squealed and charged into the chamise and continued squealing. We ~~we~~ sent Toke in after it and followed but we couldn't find it. I should have been more patient and waited for a closer shot. Next time I will.

2200 PST Started checking the traps I set at H<sub>225</sub> 79-100B and <sup>at</sup> H 134. At 17 of the 19 houses I gave the rats a choice between traps baited w. crushed corn and crushed corn with a slice of apple. I didn't have any double captures (too early also a very bright moonlit night) and I caught nothing at 3 houses. ~~At~~ the remaining 14 houses, woodrats choose the apple-baited trap by an 11:3 margin. ( $\chi^2 = 2.48889$ ,  $0.5 < p < .1$ ) There were no surprises other than the capture of ♀1694-95 (200g) at H.91A. She was last captured at H.91A on April 12th '88 (weighing 100g) and at H.91A on March 30th (60g). Both of those houses have been trapped on numerous occasions since then. Where has she been? ~~?~~

♂1762-63 fell c. 15' from the live Oak that contains H.100A (40' up in tree). He seemed fine though and hopped away to another smaller live Oak on the NE. side of the grove.



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1988

## Journal

Tues  
June 28 Slept in until 0800. Updated my notes.  
I spent the early afternoon checking on the location of all my trap shelters and traps. As I suspected, I could not account for 2 shelters (4 traps).

Set traps from 100A to 204 and 132. I also found fresh rat sign in a hollow log upcreek from H.100. Trapped that too.

2130 Started checking: Caught a new ♂ (1865-66, 182g) at the hollow log (100D). I also had another new ♂ (1874-75, 179g) at H.127A. He squealed a lot and his presumptive mother (♀ 1197?) duly responded with extensive tail-rattling and exploratory excursions. No other surprises. Bed by 1 a.m.

Wed  
June 29 0913pst Ellie Steinberg gave me a 57g juv. ♂ woodrat which fell from the Antler Room attic onto her bed around 0300 this morning. She said it called out a lot and mom (♀ 1350?) responded by tail-rattling overhead and in the walls. He in turn followed the sound of her T.R. as she moved through the walls around the Antler Room. Ellie finally trapped the little guy in a Sherman this morning. I returned him to the attic even though he seemed fairly stressed out. I want to recapture him, and ribs with Mom for tissues and specimens soon.





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1988

## Journal

June 29 Got some pointers from Jim Griffin on  
(cont.) mapping the vegetation along Big Creek.

<sup>4 mi</sup>  
July 1st Saw a large Crotalus viridis along  
the lane - it was about 36" in length and  
2-3" in diameter. It entered the long  
field lane-side vegetation between  
woodrat houses 136 and 139.

July 14

### Museum of Vertebrate Zoology

Walter Koenig brought me up 2 woodrats  
he captured in his garage at Hastings:  
♀ 1350 (captured during the week) and an  
untagged juv. ♂ (captured last night).  
I made study skins from both, prepared  
partial skeletons and took tissues (liver,  
heart and kidney) for genetic analyses.  
Walter also captured juv. ♂ <sup>(litter-mate of above ♂)</sup> in a mouse  
snap trap during the week. Dave Ribble  
said he would put it up for me and  
save the tissues as well. ♀ 1350 had 5 scars  
in the left horn of her uterus and 3 in the  
right horn. That suggests that she has  
had 3 and possibly 4 litters this year.  
I think ♂ (Cat # 186) is ♀ 1350's mate and is  
therefore the probable father of the two  
juvenile males.



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## Journal

July 16  
(cont.)

We were too exhausted to return to Sagchar and cook dinner, so we settled for enchiladas and refreshing margaritas in town.

Sun.

Got up at 5 a.m. and checked my Sagchar

July 17

Basin locations. I captured an untagged lactating adult ♀ (#1919-20, 291g) at the U.S. We also caught a juv ♂ (#1918-17, 171g) but unfortunately he had his head caught in the trap<sup>mesh (rem. 1" x 1")</sup> and was in very poor shape. Nevertheless, we tagged him and took him back to the lab. for observation. We caught no woodrats at either the L.S. or at the Rockslide.

I might add at this stage that my objectives on this trip were to see how many of my tagged animals remained and to tag new individuals. Felisa wanted bushy-tails as part of nutritional ecology study (fiber-digestion) spanning the size range of all Neotoma (i.e. small N. lepida to large N. cinerea).

Along the Tenuckee River we only captured a single large ad. ♂<sup>41g</sup> (Felisa's #449) despite setting 25 traps over a fairly large area. Felisa wanted to bring back 12-15 bushy-tails to Irvine - that didn't look likely at this stage.



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1988

## Journal

Sat.

July 16

Sagehen Creek Field Station, Nevada Co., California  
Left Berkeley around 9 a.m. with Felisa A. Smith (grad. student from U.C. Irvine) to trap Bushy-tailed Woodrats in the Sagehen Basin and along the Truckee and Little Truckee Rivers. Felisa is a 2nd year grad student working on the nutritional ecology of Neotoma (esp. N. lepida) with Rich Lenski and Keith Justice (emeritus) at U.C.I. We stopped off in Truckee for supplies and to survey the talus slopes along the east bank of the Truckee River (USGS 15' Truckee Quadrangle (1955): T17N, R. 16 E.; Zones 15, 22 & 21). After fording the Truckee River we found that we could have driven there along a dirt road (powerline access road off Hwy 267 S. of bridge over Truckee R.). We were also surprised to find very little fresh woodrat sign in the abundant talus/cliff/Aspen habitat. At Sagehen I borrowed 20 large Tomahawk traps (mainly 1" x 1" mesh unfortunately) from the Fish Hut. We set 10 at the Upper Spring, 5 at Lower Spring and 5 at the Rockslide. Although we didn't see any fresh sign at either of the latter two locations. We then drove back to the Truckee River locations and set 25 large, <sup>rigid galvanized</sup> Sherman traps (5" x 5" x 16") at 3 locations (10, 5, + 10 respectively - Felisa has more extensive notes on these 3 locations).



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## Journal

July 17 We lifted traps from the L. Spring and Rockslide  
(cont.) and reset 10 at U. Sp and 8 at X89. We  
also relocated and reset 27 traps along  
the Tennessee River.

We captured an untagged ♀ (228g, Felicia's #400)  
at X89 on our way home from Tennessee but  
nothing at the Upper Spring.





P.A. Kelly

1988

## Journal

Sun. Hastings Natural History Reservation, Carmel Valley  
Dec. 18 Monterey Co., California

Left Berkeley at 0730 PST with Sooji de Hille (Zoo 163/183 Student). Stopped off at Rosita's Armory Cafe in Salinas at 0900 for breakfast. Sooji drove the MVZ's (stick-shift) Chevy Blazer so I could leave the Toyota Pick Up with Cathy. Picked up \$46 of groceries in Nob Hill Foods in Salinas. Arrived at Hastings at 1105 PST. Cool all day long (max 63°F), cloudy and overcast, more rain threatening. From 1230-<sup>1600</sup>~~1400~~ (in shelter as usual) we set pairs of traps, baited w. horse feed and supplied all w. bedding at ~~40~~<sup>34</sup> houses (H.41 to 100 D approx.). Found 2 new large houses: [94A] at base of Arroyo Willow across creek (NW of) H. 95; [92A] about 2 m. S. of H. 92 under A. Willow and Blackberry. H. 54 has been reactivated. Didn't check any traps in the evening.

Mon.  
Dec. 19

0625 Started checking traps. Damp night but at least it didn't rain and the rats were snug in the wooden shelters w. bedding. We caught 36 rats with one double capture at H. 71. Could not locate ♀ 2250 or ♀ 221347 (ie 2272) - 2 old surviving matriarchs. Caught nothing at 5 houses - ie. 87½% trapping success. Didn't finish until 0935 PST.

In the afternoon we set <sup>52</sup>~~49~~ sets of traps at H. 1 - 100C. Retrapped only 50, 51, 60, 61, 62, 66A, 66, 73, 89, 94A, 97, 98, 100C.



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## Journal

Mon.  
Dec. 19

Jim + Carol Patton and Maria da Silva arrived at Hastings around 9.30 p.m. to help w. trapping and School Hill Rat House mapping tomorrow.

Tues.  
Dec. 20

0618 Started checking traps with Soogi. Caught ♂ 1799-1800 at H.3A (Rosa clump near the Y), he was at H.50 at Halloween. Another ♂ (1687-88) at the Sycamore Hze (2A) had really extensive fur dunge on his rump - all gray only underfur was visible - no <sup>on</sup> winds though. Located one of the missing material chs (♀ 2250). She has moved from H.50 up- and across - creek to H.45. She also had ~~a little~~ fur dunge on her ~~back~~ rump. We also caught a new ♂ (1968-69) in the old fallen live Oak debris inside the gate by Blom Knoll. <sup>Caught</sup> 43 rats at 41 Hzes, <sup>76.85% Trapping Success</sup> double captures.

Mid morning, Jim, Carol, Maria, Soogi and I mapped Hzes 301 - 327 accurately. [School Hill <sup>Nature</sup> Live Oak Woodland S. End of Gate 4 field]. We want to do a Nearest Neighbour Analysis to see if rats houses are clumped or dispersed randomly thro' suitable habitat.

In the afternoon, Jim, Maria and I set pairs of traps at Hzes 101A - 140 & 201 - 209A. Started raining heavily. Let's hope the trap shelters keep the rats warm + dry. Rained heavily all evening. Soogi put up a nice S. beecheyi (road kill) with our collective assistance.



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## Journal

Wed.  
Dec. 21

0700: checked traps with Gooji, Maria & Jim.  
We caught 16 rats at 15 <sup>houses</sup> - 29<sub>n</sub> trapped.  
(48.3% trapping success/live). The low success  
is no doubt a function of the continuous  
and often heavy rain that fell all night  
long. Nevertheless, all 16 animals were surp-  
risingly and cozy in their shelters. Caught a  
new ♂ (1970-71) at H. 139<sup>8</sup>. Also had a new ♀  
(1972-73) at H. 130, I wonder if she is kin of  
♀ 1229 [moved → H. 506 in May 87] and her daughter ♀ 1384,  
or ♂ 1677 who was there [H. 130] at Halloween. Stopped  
raining while we trap-checked but it started  
again after breakfast and continued off and on  
all morning. So we decided not to trap any  
more houses on School Hill for the moment.



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Journal

California





P.A. Kelly

1989

## Journal

Feb. 25 Beniones Reg. Park, Contra Costa Co., California

(Sat.) Zoo 107/187 field trip to W. end of Beniones Reg. Park (Bear Cr. Ent.) to search for amphibians and reptiles w. Hardy Greene. About 40 Students - TAs: Scott Edwards, Chuck Yoc & I. Intermittent cloudiness + showers with sunshine. At the Bear Cr. Ent. we noticed 5 Turkey Vultures feeding on what appeared to be a Red Yoc <sup>on a hillside or</sup> on the N side of the entrance gate.

Two hours later (c. 10:15 am) we found a gray fox lying in Homestead Field. It didn't appear injured and although its eyes were clear and breathing strong we felt it was dying from something (gunshot?, dog bite?). I carefully placed it in a student's backpack and drove to Berkeley. It seemed to go into convulsions, scratching at the inside of the pack periodically. Dr. Sheriro at <sup>(2126 Haste @ Shattuck 808-5041)</sup> the Berkeley Dog and Cat Hospital took a look at it and could not detect any reflexes whatsoever. He concluded that it had severe neurological damage possibly due to strychnine poisoning or tetanus. He put it to sleep with an injection of barbiturates to the heart. I brought the body to the MVZ for an autopsy and specimen



P.A. Kelly  
1989

## Journal

Feb. 25 Benigno Reg. Park, Contra Costa Co., California  
(cont.) preparation next week. (Cat. # 193)

I called the Nature Area at Tilden Reg. Park and talked w. Lucy. She said they also had come across an otherwise healthy-looking dead gray fox in Tilden recently.

So what is happening that we get 3 dead foxes over the space of a week or two? Poisoning campaign? Viruses?

July 28 Hastings Natural History Reservation, ~~Mar~~ Carmel  
(Fri.) Valley, Monterey Co., California

Left Berkeley at 11am (10:00 PST) with Soozie de Mille to map about 50 as-yet-unmapped woodrat houses in and around the Long Field area. I wanted to do the job accurately (previously I used measuring tapes and compass readings from Jim Patton's Long Field gopher genid markings). I also wanted to complete the chore quickly without getting covered with poison oak resin. I was able to borrow a Plane Table, a Hilger & Watts Microptic Alidade and a Stadia Rod from Prof. James A. Andersson (U.C. B., Civil Engineering). He gave me an introduction to using the equipment and I also used "Surveying Theory and Practice" (Davis, Foote, Andersson + Mikhail, 6th Ed., 1981 McGraw-Hill) especially pp 284-290 and 623-625. We arrived at Hastings c. 3 p.m.



PA Kelly  
1989

## Journal

July 28 1835 PST Found the remains of 2 rats in  
(cont.) 2 separate traps at House 37. One was  
♀ 1756-57 and the other was ♂ 1877-78. She  
was last captured <sup>by me</sup> at H.39 on 20 Dec 1988  
weighing 181g and he was last captured  
by Soozie deMille & Sarah West at H.39 on  
29 May 1988 weighing 283g. Evidently Soozie  
and Sarah left a pair of traps open at  
H.37 when they did a census for me from  
29-31 May 1988. Decided to keep the skulls  
since they are both of known age: ♀ 1756-57  
was born in April '88 (1st capt. 12 May 88 - 78g) —  
Cat # PK 194; ♂ 1877-78 was probably born in Apr.  
May '88 (1st capt. 29 June 88 - 154g - Cat # PK 195.

1857 PST Hze 58B (in hollow Red Willow that crosses  
creek at H.58A) is looking very active. Also found  
another metal <sup>house</sup> Green marker (# 2266) between  
58 and 58A.

Aspen Willow in the creek bed at H65 has  
collapsed into the cr. bed - impassable. The  
drought <sup>(3 years now - Big Creek last flowed in Summer '86)</sup> seems to be taking a heavy toll on  
the flora along the creek although the rats fed.  
do not seem to be adversely affected.

1919 PST found a new house at the base of  
a large red willow in the middle of the  
wide creek bed between House 74 & Hze 76.  
Designating it as H.76A.



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## Journal

July 28 after stopping for groceries and lunch (Rita's  
(cont.) Army Cafe) in Salinas.

We started surveying right away and we plotted the locations of Houses 113, 114 & 115 from Station D11 (Horseshoe Field Grid Marker). We then plotted the location of the eastern apex of a large triangular rock in the creek bed and we used this point ~~at~~ as the next station to plot houses 116 and 126. For D11 I assumed a datum of 487.68 m since it is fairly close to the 1600 ft contour line on the 7.5 min. Rana Creek Quadrangle (USGS, 1956). The alidade <sup>then</sup> provided an elev. of 485.61 m for the triangular rock (eastern apex). I did not have time to take measurements from the benchmark on Finch Creek.

1810 PST started setting traps from H22 to H28. H22A inactive, H23 reactivated as has H28. Saw a woodrat leave the latter (1811 PST) and head down into the creek. Small elder between 25 & 25A has more or less collapsed - used to be used as an arboreal runway between the 2 houses. Also more of the red willow at H31 has collapsed over the house. Big chunks of the Red Willow over H32 have also fallen down. 32 and 34 and 31 active.





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## Journal

July 28 1954 PST Getting quite dark as I set the last  
(cont.) pair of traps. Altogether set 102 traps @ 51 houses.

Sat. July 29 Checked traps from 0500-0823 PST. Caught  
45 rats at 43 houses: 21 ♂♂ & 24 ♀♀.  
Captured 9 new individuals (double-tagged 2016-2024):  
3 ♂♂ and 6 ♀♀.  $\frac{3}{24}$  ♀♀ (12.5%) were  
perforate and one of these (♀1465) only slightly so.  
Got hold of Soozie and we resumed our  
effort to map as many of the "missing"  
houses as possible. We first finished  
off the lower section of the study site:  
houses 117, 118, 119A, 120, 123, 127A, 129, 112, 201,  
201A, 202, 204, 205, 207, 209, 209A, 210. I did  
not bother to map <sup>most</sup> defunct houses because  
of time constraints. In the afternoon and  
early evening we located and mapped 2  
houses at the 1st crossing (127 + 138), one  
house <sup>(221)</sup> high up on Haystack Hill over Horsetail  
Field, and a series of houses upfield (100A,  
100B, 100C, 100D, 100E, 132, 131, 101A, 101B, 103A,  
106A, 106B). Soozie also pointed out a new  
house she found in May immediately South  
of H.106 but they caught nothing there. <sup>1800 PST</sup> Exhausted  
we decided to pack it in and return to the Hastings  
Cabin for dinner. Helped David Ribble to take a series  
of long exposure shots (slides) of *Peromyscus calif.* with pigment  
bander deposits.



PA Kelly  
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## Journal

Sun July 30 0600 PST. Geogi and I resumed mapping the remaining houses. We located H.506<sup>(on School Hill)</sup> in relation to H.130<sup>(along lane)</sup> with the alidade. ♀ 1209 moved uphill to H506 from H130 - horizontal distance 24.5 m, vertical distance 7.6 m, inclined distance 25.7 m. We also located H.331 (on School Hill) in relation to H.136 in a similar fashion. The remaining houses we mapped using a good compass and Jim Patton's measuring tapes: i.e. 134, 136, 139, 140, 349 (on Sch Hill), 2A, 3A, 1A, 1B, 28A, 91A, 92A, 94A. Houses 101A, 101B, 103A, 106A, 106B and 111A were also mapped in this fashion yesterday. Acceptable technique fairly flat for open poison-oak-free habitat.

1000 PST packed the truck and headed back to Berkeley.



P. A. Kelly

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PA Kelly  
1990

## Journal

San Jacinto Wildlife Area, Riverside County,  
California (1500 ft.)

Wed.  
Feb. 7

Ross Goldingay and I set <sup>two</sup> 100 traps grid across brush/grassland ecotones on both sides of Davis Rd. near the DFG headquarters. Around 10pm captured ten D. stephensi on the grid nearest the H.Q. and only one D. agilis on the other grid. One of the D. stephensi was in very bad shape and subsequently died (cat #196). He weighed only 53g whereas all the others weighed 62g or more. He was fully scrotal, not hypothermic and no trauma was evident. His cheek pouches were empty (unlike the others) and autopsy revealed an empty stomach and zero body fat. His peritoneum also had a greenish tinge and I wondered if he had a ruptured gall bladder. He also smelled strongly. We informed the DFG, and the Fish & Wildlife Service, and I asked Sarah George at L.A. Co. Mus. if she wanted me to put up such casualties as study skins. Closed most traps <sup>light raining</sup> because of

Thurs  
Feb 8

Reset the 200 traps and set 30 more at active excavated burrows in plowed areas. Ross and Rhoda Arcanio captured 2 D. stephensi at those





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## Journal.

burrows around midnight. They then closed all traps because the  $T_a$  dropped to  $0^\circ\text{C}$ .

Feb. 9 6:30 - 8:00 am Rhoda and I lifted all the traps and returned to Riverside

Mon. Mar. 5 Matte Rimrock Reserve, Riverside Co., California  
Ross + I Set 100 traps on Rhoda's grid for SKRs. We replaced Rhoda's flags with numbered stakes over the past few weeks and this is the first attempt to actually get demographic data for the project. We decided to close the traps at 10 pm when the temp. dropped to  $2^\circ\text{C}$ . We nevertheless captured 6 SKRs: 4 new and 2 tagged by Rhoda.

Tues. Mar. 6 Reset 100 traps between 4 and 5 p.m. and decided to close them again by midnight since the temp dropped to  $4^\circ\text{C}$ . We captured 10 SKRs: 4 recaps from last night and 6 others (3 new + 3 tagged by Rhoda).

Wed. Mar. 7 Lifted all 100 traps.

Thurs. Mar. 8 Granite Mtns Reserve, San Bernardino Co., California  
2 pm Felisa Smith picked me up in Riverside and we drove to the Granites. We set 200 traps on her Nestoma lepida site near the Bunny Club in the dark. Conditions were very mild so we



## Journal

deferred trap-checking until dawn. The Bunny Club was available to us for the weekend. It was quite an experience staying there.

Fri.  
Mar 9

Started checking traps c. 5 am. Poor trap success mainly D. panamintinus and Peromyscus but we also caught one Neotoma lepida. Scott Elliott arrived in the early evening. While we played Scrabble, a ringtail climbed up on the rock in the center of the Bunny Club living room and watched us. My first ever sighting of Bassariscus astutus - beautiful animal. While we slept he patrolled the kitchen work tops while a spotted skunk thumped around on the floor looking for garbage.

Sat.  
Mar 10

Scott made breakfast while Felicia and I checked the traps. Similar results to last night but one more lepida. In the mid-afternoon I got Scott and Felicia to leave me at the base of Cottonwood Canyon so that I could take a hike in search of Neotoma fuscipes houses.

















